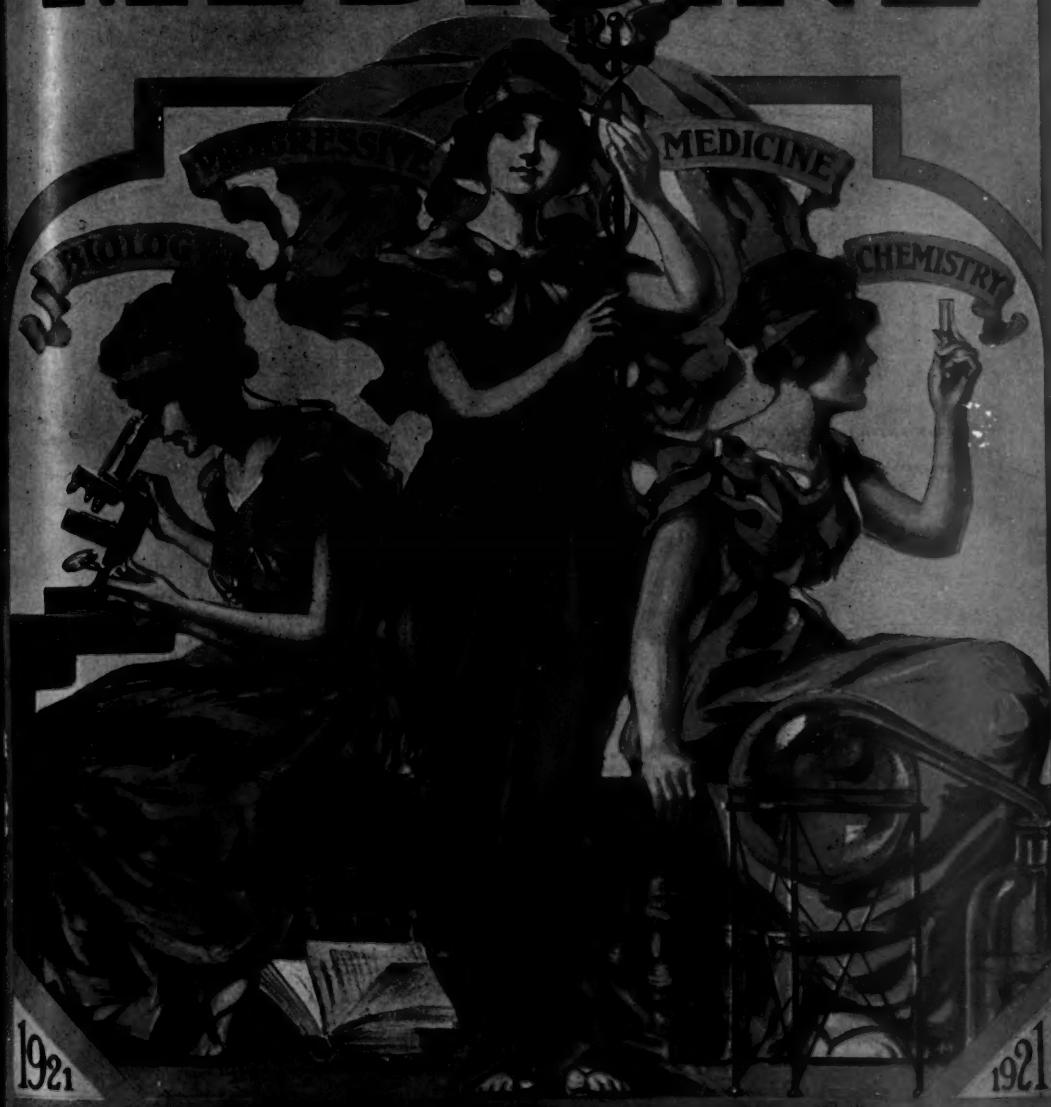


JUN 9 1921

THE AMERICAN JOURNAL OF
CLINICAL MEDICINE



JUNE PROGRESS NUMBER

Standard Product in Heart Cases

Digitan

introduced as

Digipuratum

Physiologically Standardized Digitannoids

This product, first introduced as Digipuratum, is manufactured under license from the Federal Trade Commission and accurately standardized according to the original tests.

Rapid and Reliable in Action. Uniform in Strength

Supplied in Powder and 1½ grain Tablets

1½ grains powder or 1 tablet Digitan equal to 1½ grains strongly active digitalis leaves—8 frog units.

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Hay Fever Memoranda Series II

LATE SPRING TYPE. Patients whose hay fever develops in the latter part of May, or during June, should be tested with the pollens of the chief grasses, such as orchard grass, timothy, red top—and certain early flowering weeds.

LATE SUMMER TYPE. Patients whose hay fever develops in mid-August and continues until frost should be tested with the pollens of such weeds as ragweed and goldenrod, the related sunflower; also, with the pollen of the one important late flowering grass, viz., corn, if exposed to same.

Arlco-Pollen Extracts

For Cutaneous Tests and Treatment cover early and late spring, also summer and autumn.

Literature and List of Pollens on Request

The Arlington Chemical Company
Yonkers, New York

The American Journal of

CLINICAL MEDICINE

Dependable Therapeutic Fact for Daily Use



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Foods and the Doctor

THE question of dietetics is one of increasing interest and importance. Evidence of this fact is seen in the rapidly accumulating literature on the vitamine problem, which is engaging the attention of dieticians and laboratory leaders.

The field of dietetics is a wide one. Most of the patients coming to the doctor, either for medical attention or operative work, receive some advice as to diet. A most common question on the part of the doctor is—"What are you eating", and on the part of the patient—"What can I eat?" It is a fact, too well-known to need mention, that many of the ills to which the flesh is heir are caused by indiscretions in eating, faulty elimination, and malassimilation.

For these reasons, perfectly obvious, the medical profession is becoming more and more interested in the whole question of dietetics including infant feeding, which has become a science in itself. CLINICAL MEDICINE, realizing the practical importance of this subject, has devoted considerable space to editorials, articles, and reviews, touching upon proper diet in various conditions. In order to ascertain how many of our readers are interested and to what extent

they are recommending prepared foods of various kinds, a questionnaire was mailed to a number of our subscribers, practicing in various states.

It is interesting to note, from the many replies which have come in, that the foods most frequently mentioned are those which have been advertised to the medical profession most persistently. These brands, in the order given are:

- 1.—Mellin's.
- 2.—Horlick's Malted Milk,
- 3.—Unspecified brands of Malted Milk,
- 4.—Borden's Eagle Brand Condensed Milk.
- 5.—Nestle's Food,
- 6.—Eskay's Food,
- 7.—Mead's Malt Dextro Maltose,
- 8.—Liquid Peptonoids.

Other foods mentioned are:—

Imperial Granum
Dennos
Kellogg's Bran
DryCo Milk
Valentine's Liquid Beef
Thompson's Malted Milk
Lister's Diabetic Flour
Bovinine
Virol
Ovaltine
Gluten
Trophonine
Shredded Wheat

Uncle Sam's Breakfast Food
 Agar
 Grapenuts
 Robinson's Barley Flour
 Panopeptone
 Fairchild's
 Thompson's Foods
 Roman Meal
 Borchardt's
 Klim
 Predigested Foods
 Tropon
 Wiedman's Goat Milk
 Jirah Foods for Diabetics
 Brooks' Baby Barley
 Post Toasties
 Steero Cubes
 Coors Milk
 Postum
 Hypophosphates
 Welch Grape Juice
 Zwieback
 Rexall's Milk Sugar
 Liebig's Beef Extract
 Lipton's Teas
 Ralston
 Bran Breakfast Food
 Jiffy Jell
 Cream of Wheat
 Quaker Rolled Oats

Twenty-five of the foods mentioned, have at some time, been advertised in CLINICAL MEDICINE, and many of these announcements are now appearing.

In view of the quite general interest in dietetics which this preliminary survey indicates, CLINICAL MEDICINE will continue to print practical articles from time to time, relating to food problems, and the importance of proper diet for health and disease

When a man does not suffer, he does not normally think of himself. But, let disease or privation appear with its attendant introspections, and he immediately discovers his ego.—Charles B. Reed.

VIOLATING PROFESSIONAL SECRECY

We are in receipt of several communications, mostly from laymen, protesting against the unprofessional action of Dr. Hugh L. Russel, the osteopathic practitioner in Buffalo, who testified against Mrs. Stillman, in the divorce proceedings pending, and who repeated in court alleged information that had been confided to him, if at all, under the seal of professional secrecy. Our correspondents are highly indignant at this flagrant violation of confidence and castigate "Doctor" Russel in no uncertain terms.

We can not, at this time, enter into the question at length, the time being too short. However, we intend to discuss the problem

of professional secrecy in some detail, in the next issue of CLINICAL MEDICINE. At this time, we may suggest only, that osteopathic practitioners are not, generally, so fully imbued with the traditions of the healing profession as are "regular" physicians, and that possibly they, or some of them, may not consider themselves to be bound by the same high standards of conduct that have been our guidance even since before Hippocrates formulated the famous Oath that is known by his name.

STARCHLESS FOODS

A well-known firm of manufacturers of sugarless and starchless foods suggests in a letter to the Editor that any food sold for the special use of diabetics should always be sold with a complete analysis; some of these preparations carrying virtually as much starch as do ordinary foods. It is asserted that any "diabetic" flour carrying more than sixty percent of starch can hardly be called by that term as it approaches very closely the starch content of whole wheat flour.

This point, we believe, is well taken. Food products offered for special use, such as allegedly starchless flours and other foods that are to be utilized for diabetics, should actually carry a smaller amount of starch in order to merit this name. It is quite proper, too, we believe, to demand a quantitative analysis of such foods so that the physician ordering them can be certain as to just how much starch and how much of other food substances his diabetic patient is ingesting.

GOOD HARD CASH

The time has come when the school sessions close, plans are made to send the children to the country or to provide for them a vacation in some other way; and, also, plans are no less in order to give Daddy and Mother a change from the everlasting grind of daily life and work.

We are convinced that, of all members of the family, the parents are most in need of a change, of a vacation and of rest. Except in closely built-up portions of large cities, children can be made happy almost anywhere; the cessation of school by itself affording them rest and increased opportunity for recreation and outdoor life. It

is the parents in whom "school is out" arouses mixed feelings. Mother, for instance, no longer has the time during school hours, when she may attend to her various household duties in comparative quiet. The little Indians (God bless them!), being at home and everlastingly underfoot, show no mercy—because they do not think—in their constant demands on Mother's sympathy and assistance. Her work is increased during vacation time; and, it should be made possible for her to have two or more weeks away from the storm and stress of home life and home duties.

No less the *pater familias*; especially if he be a physician. We have learned that no one can do good and fruitful work who is tied to his duties week in, week out, month after month and year after year, without a let-up. We have witnessed only too often the evil consequences of such continuous and unremitting toil and strain. It is a self-evident matter that the physician is in urgent need of a period of freedom from his duties; a time during which he sees no patients, hears nothing of illness; is not asked for advice of any kind; and when he is not called upon to shoulder any responsibility involving the life and health of any person.

All this being granted without discussion, the question arises how to make possible that break in the daily routine, how to enable the doctor to leave his work for the space of a month or so, and how to procure the same beneficial rest for his wife, the mother of his children. Under circumstances as they have existed for some years, the practice of medicine has not been a highly remunerative vocation for the majority of general practitioners. If current expenses were covered, the interest on the mortgage met and, perhaps, a little was paid off on the principal; if the policies for life, accident, fire-insurance and other forms of insurance could be kept up, that is about the extent to which most men could go. Not everybody has been fortunate enough to put aside a "travel-fund" or a special savings-account that might be utilized for the vacation trip which is needed so much.

However, here is a suggestion for securing ready cash. We have been talking and writing and urging that better and stricter business methods should be inaugurated. Where this advice has been followed, we have no doubt but what a requisite sum for

vacation expenses has been set aside. Where the old, casual manner of collecting moneys due has been adhered to, it might be a good thing to send out the half-yearly statements promptly and to impress it upon the patients that it is necessary for them to pay their medical attendant *before* they leave on their vacation, so that he, in his turn, may have one. Surely, he is in need of it as much as they. Some of the money they have in bank belongs to him, since they owe it. Therefore, let them pay up.

It might even be a good thing to talk to the editors of the small-town weeklies and dailies and to "put them next". They will have a fellow feeling for the doctor. They may easily be induced to write a little paragraph on the fair dealing that is due to the doctor.

Collect your bills, promptly, Doctor. Then, take that vacation. Take your wife with you, or send her home to her folks. Anyway, see to it that she gets a rest, too. The kiddies may be left with Aunt Sue or with Sister Kate; and, they will appreciate Home all the more, and will greet Daddy and Mother with all the greater enthusiasm because of the temporary separation from them.

And what is so rare as a day in June,
Then, if ever, come perfect days;
Then heaven tries earth if it be in tune,
And over it softly her warm ear lays.

—Lowell.

DRINKING WATER IN CONSTI- PATION

The value of drinking freely of water in overcoming habitual constipation is not as fully appreciated as it should be. The writer saw a case, last year, which was a good illustration of the effects of the use of pure, soft water. The patient had for years averaged not more than two evacuations a week and, sometimes, less. He had tried cathartics but with no permanent benefit. He had resorted to eating bran in various forms, which had seemed to work well for a time; but, as might have been expected, when the bowel became accustomed to it, the constipation became worse than ever, with the additional discomfort that the rough bran in the hard stools so irritated the rectum that he began to suffer from hemorrhoids and anal fissure. He complained that he "never felt like work". (Of course, that is a chronic condition

with some people, irrespective of constipation.)

The piles and fissures then drove him to seek medical advice in spite of the fact that, as he expressed it, he "had little use for doctors". On being questioned, he admitted that he seldom drank water, as he did not care for it. While being treated for the local trouble, he was advised to get some pure, soft, spring water and drink as much as he could, four times a day; namely, on rising, and one hour after breakfast, lunch and dinner. At first, he could not take more than half a glassful without becoming a little nauseated; however, he was gradually able to increase to a glass on rising and even more than a glass at the other times. The effect was interesting. The stools gradually became softer and larger. In about two weeks, they had become thin and quite offensive. It seemed as if he were clearing out the accumulations of weeks. Gradually, the evacuations became normal in odor and consistency, with daily action.

Of course, not every patient will react in this satisfactory manner, still, the result suggests a fact too, often overlooked in dealing with constipation, namely, that most people do not drink enough water. As this patient had made no change in diet and taken no medicine, the result was certainly due to the abundance of pure, soft drinking water, and the softness was probably an important factor. Distilled water might do as well as spring water, though many persons can not take it without nausea. It has often been observed that a glass of cold water, taken a half hour or so after breakfast, will be followed in five or ten minutes by the impulse to evacuate the bowels. It is worth remembering, too, that the free use of water flushes the kidneys and helps get rid of the wastes of body tissues.

Tell me what you eat, and I will tell you what you are.—Brillat Savarin.

OPEN LOCATIONS

A friend of ours, who is salesman for a manufacturing drug house, informs us, as to open locations for physicians, that there is nothing available but in small towns. The larger towns are filled to capacity. However, he opines that, for a physician who is really a *good* practitioner, any location is a good location.

That, we suppose, is true enough, in a

way. Even so, however, the very best "good practitioner" must be able to get warm in any new nest that he may construct for himself or try to construct.

What we want to stress, though, is the fact that, apparently, there are numerous good openings for small-town and country locations. Recent developments, largely due to the increasingly high cost of acquiring a medical education, in addition to various other factors, have brought it about that the young men no longer are willing to go to the country when starting in practice. They want to be near the center of things; they prefer to starve in a large city rather than make good money in the country.

True, there is a psychological factor here that is very active and very potent. The country people and the small-town people are themselves to blame for these conditions, in a way. A medical man who settles in such a small town, or country locality, is viewed with a certain degree of suspicion. He can not be much, people say, or else he would be in the city. They themselves suspect that a man who is worth while would find a paying practice in larger centers of population. Their very natural distrust is not ready to admit that a perfectly-well equipped medical man may go to the country for several legitimate reasons. These may be, among others, a personal preference for living in the country or in a small place. There may be the somewhat quixotic altruistic idea that country people and small-town inhabitants are fully entitled to the best possible medical services. There may be the desire, on the part of the physician, of giving to his family the manifest advantages of country life. In short, many things will contribute to incite a physician to open up an office and attempt to build up a practice in the country.

Professionally speaking, such an undertaking is certain to pay. To be sure, in the country, possibly more so than elsewhere, the doctor must prove himself. He must demonstrate his ability, his sincerity of purpose, his willingness to make good. However (we speak from personal experience), it does not take nearly so long in the country as it does in the city for a physician to become established in a paying practice. Even in these days of automobiles, of rapid transportation and shortened distances, there is a vast amount of splendid work to be accomplished by a sincere and capable

young physician who is not afraid of hard work and lots of it, and who will settle down in the country for the purpose of becoming a real practitioner of medicine.

The present writer has been a country physician himself. The work is hard, sometimes ungrateful. Still, as a whole, there are ample and full compensations to be found in country practice. There are things that make it worth while and that repay fully the devotion expected from the physician in the country. We can not but urge the young men just starting in practice, or looking for a location, to go to the country or to a small town and to get the experience that can be found there better than anywhere else, because it pays better not only in kind but also in the abstract.

Incidentally, we are informed that, a short time ago, a physician was needed in Olmsted Falls, Ohio, to take over the practice of the late Dr. William Westbrook.

Dr. R. Y. Phillips, Arkadelphia, Ark., has an opening in his office for a young physician just out of school. He is willing to pay to a good man a straight salary at the rate of three or four thousand per annum.

There is an excellent location at Waynesburg, Ky., for a doctor willing to put up with the inconveniences of a semi-mountain country.

There is no doctor in about a 7-mile radius, excepting a farmer, formerly a physician, who is registered in Tennessee and is doing emergency practice only, for the convenience of the people.

He is Dr. F. P. Gruim, and we are sure that he will be glad to furnish further information as he is not seeking any of the medical work.

If you want to be rich give! If you want to be poor, grasp! If you want abundance, scatter! If you want to be needy, hoard!

THE IMPORTANCE OF LITTLE THINGS

In his Mackenzie Davidson Memorial Lecture (*The Lancet*, Mar. 26, 1921, p. 627), Dr. W. D. Halliburton referred to a presidential address given many years ago by the late Sir Frederick Brambell before the British Association and who, in his turn, alluded to a speech he had heard from the late Lord Iddesleigh who charmed an audience for a whole evening by speaking on the very important subject, "Nothing". Sir Frederick Bramwell said he would not try to copy this feat, but would do his best

to speak on "Next to Nothing". By this neat phrase, he meant those little things which are of supreme importance.

Doctor Halliburton himself discanted interestingly upon those same little things that, considered at first merely in the abstract and perhaps studied solely through a love of investigation, yet, in time, proved to be of immense practical importance. Going back to Galvani, who accidentally touched the muscles of a frog with different metals and observed their contraction, Halliburton traced briefly the immense structure of scientific research and practical accomplishment based upon an understanding and application of electricity. The study of little things, purely incited by academical interest, is by no means to be decried. Lister's work could not have been done without the preliminary academic labors of the chemist Pasteur. Miescher's investigations of the chemistry of the roe of the salmon was a purely academical one, and Miescher had no idea that upon the results of his investigations our knowledge of the pathology of gout would be founded. When Bayliss applied himself to study colloids, he could not have dreamed that a powerful therapeutic weapon would be discovered in that by-path.

Incidentally, Halliburton deplores the present-day tendency, however much it may be justified through an ever increasing crowding of the curriculum, to reduce purely-theoretical studies in the medical college and especially to diminish the physiological teaching to a minimum. Physiology and chemistry are so essentially basic for the later medical studies that it can only result in injury to neglect them in the teaching of the medical students.

Doctor Halliburton further refers to what is now known as hormones, the discovery of which, by Bayliss and Starling, revolutionized our views of, at first, the digestive and absorptive processes and, then, other physiological happenings in the body. Starting from purely academical investigation, the practical importance of these studies can hardly be appreciated even yet. With the hormones, of course, are intimately connected the products of all endocrine glands, the study of which has progressed greatly.

Then there are the accessory-food factors, the vitamines, a knowledge of which

has helped to explain numerous facts that had hitherto been known imperfectly and empirically. Incidentally, Halliburton declares justly that empiricism is not always to be condemned. What we call empiricism is frequently the result of past experience. As an example, take a prescription of cod-liver oil, or of butter and cream. A few years ago, it would have been impossible to explain why these forms of fat are superior, we will say, to olive oil and vegetable margarine. The mere fact that they are better was empirical; but, now, the practitioner has been fully justified, and research at last has told us the explanation—namely, the existence, in those fats which are the more valuable for remedying malnutrition, of a health-giving vitamin.

Empirical Experience and Scientific Foundation.—May not this in the future be repeated? Halliburton continues: If you have high blood pressure, why does your medical man tell you you may take fish and poultry and eggs, but that you must abstain from beef and mutton? I can picture a skeptical and argumentative physiologist saying, "Why? The materials you mention and I am advised to take, or refrain from taking, are all in the main composed of protein and, surely, it is not physiological to give me such futile advice." My answers to this would be, "True it is not explicable, yet, on physiological grounds. It is the mere result of empirical experience. But, wait a few years, and it is quite on the cards that by that time science may have stepped in and explained the puzzle, just as a few years ago it was able to explain why codliver oil is better than olive oil." There is probably in the harmful meats some hitherto unrecognized principle, unrecognized because it is present in minute quantities; or it may be the absence of an indispensable material. It is one of the "next to nothings," but it makes all the difference. "There is one kind of flesh of men, another flesh of beasts, another of fishes, and another of birds." I wonder if St. Paul ever imagined that these pregnant words contained more than what he intended to convey by them?

THE OLIVE ON TRIAL

Of late, the ripe olive has been blamed for several epidemics of botulism in this country, with quite a number of fatalities.

For this reason, the fruit was made the subject of bacteriological examinations in some of the states, among them, Pennsylvania. Rosenberger, of the Jefferson Medical College, recently did some work of this sort, by direction of the Dairy and Food Commission of that state.

More than 250 samples, secured in the open market, were examined, including bulk olives, canned whole olives and crushed olives, or sandwich paste, made from this fruit together with pimento.

The cans or bottles were taken as they came and as they would be received by any customer, with the exception of leaky packages or cans showing bulged ends which, it was assumed, would not be sold in any store or, at least, if offered, would be rejected by the customer.

Both the liquor in which the olives were immersed, and a suspension made from the pulp, were cultured. The organisms derived proved to be mold fungi and their spores, as well as yeasts; some few samples showed chains of Gram-negative micrococci; others were found to contain Gram-positive bacilli. Filaments of germs resembling the lactic acid bacillus were also encountered. Exposure to the air, both in and out of the commercial liquor, on window sills and upon tables within, as well as in dark cupboards, failed to give cultures materially different.

White mice and guinea-pigs were fed experimentally on bread soaked in salt suspensions; in other instances, they were inoculated. But, none developed the hind-leg paralysis that supposedly is characteristic of botulism.

From this, it is concluded that none except obviously spoiled lots, as denoted by a putrid odor, for one thing, are to be feared.

There are four varieties in society—the lovers, the ambitious, observers, and fools. The fools are the happiest.—Taine.

HINTS ON THE USE OF MINERAL OIL

The value of liquid paraffin in conditions of intestinal stasis is now generally acknowledged. As a change from cathartic drugs, it is to be commended, especially for persons habitually constipated and for years altogether dependent on cathartics. The oil acts only mechanically, lubricating the intestinal mucosa, softening the fecal

masses, and so facilitating the passage of the food residue through the lumen of the bowel, being thus, to repeat, a welcome departure from the more or less harsh eliminants that act by irritation or hydrogog effect.

Mineral oil is a good regulator for women and persons of sedentary habits; while for small children it may wisely, as a rule, displace castor oil to the reckless use of which constipation in later life is often due. In such patients, bowel disorders, declaring themselves in terms of colic, "worminess", diarrhea, and marasmus, often clear up in a way that is quite remarkable, wth its use. But, we caution against using any but the purest of oil. It should be colorless and free from fluorescence; also odorless and tasteless, and of such viscosity that 50 mils will require at least 100 seconds to pass through Redwood's apparatus. Impure oils may contain sulphuric acid, which is irritating.

Abdominal pains at times follow the ingestion of such oils, although overdosage is held by some to be responsible for much distress, including leakage from the rectum. Samuel recommends starting with small doses, say two drachms three times daily about two hours after meals, for adults; one large dose at bedtime is still better.

A good oil, properly taken, is useful against intestinal stasis and the toxemia due to it. Its use may avert straining at stools, in the elderly and in those suffering from hypertension, piles, hernia and prostatitis; for the same reason, it is to be remembered for pregnant women. The fact that it helps to remove adherent residues from the bowel mucosa, thus reclaiming lost absorptive areas, accounts for people gaining weight under the oil treatment.

A flavored emulsion is taken by those who refuse the plain oil. It gives the best results on the whole. Besides, it serves well as a vehicle for such distasteful drugs as bismuth, creosote, guaiacol and salol.

Society is composed of slow Christians and wide-awake sinners.—H. W. Shaw.

TRUE GERMICIDES AND FALSE

Many things in this life pass for what they are not. Old eggs are offered as fresh when they clearly are not. Saccharine in the cheaper preserves and confections is

pawned off on us as sugar, which it is not. Some women comport themselves as virgins, who assuredly are not. Certain chemical substances parade as antiseptics, which in the strict sense cannot be so considered.

For example, take sodium hypochlorite. This is by no means a new compound in chemistry but, of late, we have heard much of it and heard it warmly recommended. Now, however, it transpires that it has been overrated. Investigating this agent, Lee finds that sodium hypochlorite is after all not a germicide in the strict sense of the word. Its actual germicidal property is nil. What it does is achieved rather as the result of a proteolytic, or solvent, action on the tissues and wound discharges with which it comes in contact. This action is directly due to the caustic alkali, sodium hydroxide, formed secondarily on contact with the tissues. The freed chlorine in truth plays a very small part, a part so trivial that it is not worth considering.

But, we not only have the negative efficiency of sodium hypochlorite to bemoan. The agent may positively be harmful, especially when applied to avascular tissues. A strong solution may easily destroy a tendon or cartilage and commonly, in practice, do we find solutions irritating the skin.

One wanting the desirable germicidal action of chlorine may have it, however, in the newer synthetic compounds, the chloramines. The best representative of this class is about fifty times more efficient than phenol. Its action is long and well sustained, since the halogen is but slowly released in the tissues. Even in concentrations much stronger than are necessary, it is neither irritating nor caustic. A better antiseptic for general use would be difficult if not impossible to devise.

INFANTILE PARALYSIS

The readers of CLINICAL MEDICINE have been asked what subjects for articles would interest them most. Many of them have replied, and their replies are collated in the issue for December last. One of the subjects named is infantile paralysis.

As the present writer uses a method in the after treatment of this dread disease, which differs radically from that usually followed, we give that treatment for what it may be worth. It will be opposed by

some readers, but, whenever it has been brought into contrast with other methods of treatment, it has given such a good account of itself that it seems a duty to present it for consideration.

Most writers recommend that, after the acute stage is over, the muscles be stimulated by massage and electricity, for the purpose of forestalling atrophy. This writer believes that the muscles will take care of themselves and that it is to the nerves that treatment should be directed; furthermore, that the essential feature of the treatment should be, absolute rest, freedom from and protection against all irritation. It does not seem reasonable that a nerve that has just been through an acute attack of poliomyelitis should be either stimulated or irritated. If the nerve can be kept alive, the muscular fibres will in time resume their function.

In 1910, there was an epidemic of infantile paralysis in the neighborhood of Niagara Falls, Ontario. In a certain township, there were ten cases. The writer was called to see one of these after the acute stage was over. He recommended perfect rest and light plaster casts on both lower limbs. The local physician was skeptical but carried out the treatment faithfully and, later, applied it to two or three other cases which came under his notice. The casts were changed about every three weeks for the sake of cleanliness, but no massage or irritation was used other than was necessary for bathing. There was no other treatment except good nutrition and hygiene—no electricity, no strychnine, no other tonics. Today, all who had this treatment are walking fairly well; all the other victims of that epidemic in that community are helpless, hopeless cripples.

The writer got the idea from a certain clinic in Chicago where this treatment had been followed with good results. It is a question worthy of careful consideration, whether the rational way to get a sick nerve well is, to irritate it—for, that is what stimulation amounts to.

Dine on little, and sup on less.—Cervantes.

THE PASSING OF BURROUGHS AND "B. L. T."

The month of March saw the passing of two American men of letters who could ill

be spared in this materialistic age—John Burroughs and Bert Leston Taylor, the "B. L. T." of the *Chicago Tribune*. Both were widely known and both possessed that trait of character which makes men loved as well as admired. "Our John", as Roosevelt affectionately called him, passed away at the end of a long life and a finished work—if any man's work can ever be said to be finished. Taylor died in the prime of life. If he had lived, it is thought by many that he would have been universally acknowledged as America's greatest humorist.

Burroughs never had an equal as a lover and interpreter of Nature, especially of the wild life of forest and field, and he helped thousands of his readers to follow his footsteps in a world that was hitherto a sealed book to them. He studied the life of bird and beast around him with a sympathetic mind, instead of with gun and dissecting-knife, and he read the book of Nature with an insight unknown to the mere zoologist. One could not read his writings without feeling the presence of that kindness of heart that made all living creatures his kin. A long life of tranquil observation and reflection made his ripened years fruitful in a philosophy that will perhaps be his best and most lasting monument. His later books, especially his last one, "Accepting the Universe," are rich in the matured fruit of his thinking on the great problems of life and death, right and wrong, origin and destiny. Being dead, he yet speaketh; and many a burdened soul has found solace in his sane and kindly views of life's troubles.

Bert Leston Taylor was of a different type and, yet, the two men had much in common; chiefly, an ardent love of Nature and complete freedom from cynicism. Taylor was a humorist and most humorists are inclined to be cynical. Perhaps this is because laughter is said to have had its origin in rejoicing at the misfortunes of our enemies,—"schadenfreude", as the Germans call it. Taylor's humor, though, was always of the kindly sort. It was, perhaps, this kindness that drew so many readers to his column in the *Tribune* and caused many of them habitually to turn to it before reading any other part of the paper. The work of a "colum conductor," as he called himself, is naturally of an evanescent character, consequently many of his most delicious bits

of humor will not be preserved. But, he was also a poet of no mean order. His verses breathe a profound love of the forest and its wild life, and they show his ideals of life to be of the highest type.

From his "Ballade of Spring's Unrest:"

One with the birds and the bees,
One with the squirrel and quail,
Night, and the stream's melodies—
Ho, for the pack and the trail!
Pictures and music and teas,
Theaters—books even—stale.
Ho, for the smell of the trees!
Ho, for the pack and the trail!

From "Sons of Battle:"

Let us have peace and Thy blessing,
Lord of the Wind and the Rain,
When we shall cease from oppressing,
From all injustice refrain;
When we hate falsehood and spurn it;
When we are men among men.
Let us have peace when we earn it—
Never an hour till then.

Seldom has anything more simple and beautiful been penned than his "Sundown." A British officer had said that, when the wounded in hospital came to die, their last request often was for the prayer, "Now I lay me down to sleep". B. L. T. wrote:

When my sun of life is low,
When the dewy shadows creep,
Say for me before I go,
"Now I lay me down to sleep."

I am at the journey's end,
I have sown and I must reap,
There are no more ways to mend—
"Now I lay me down to sleep."

Nothing more to doubt or dare,
Nothing more to give or keep;
Say for me the children's prayer,
"Now I lay me down to sleep."

Who has learned along the way—
Primrose path or stony steep—
More of wisdom than to say,
"Now I lay me down to sleep."

What have you more wise to tell,
When the shadows round me creep.
All is over, all is well.
"Now I lay me down to sleep."

As the soil, however rich it may be, can not be productive without culture, so the mind without cultivation can never produce good fruit.—Seneca.

THE ROCKEFELLER FOUNDATION

We have before us the "Annual Report of the Rockefeller Foundation for 1919," and it contains much of interest. Few people realize the magnitude of the work carried on by this institution, either in geo-

graphical distribution, money expended, or conquest of disease. In 1919, the field of operations included four southern states, the West Indies, Central America, four countries in South America, the Seychelles Islands, India, Ceylon, Siam, China, Australia, and France. The campaign in France was directed against tuberculosis; in China, mainly towards developing medical education; in the other countries, it was a warfare upon yellow fever, malaria, and hookworm.

One of the most striking events of the year was, the extermination of yellow fever in Guayaquil, the capital of Ecuador, which for generations has been a focus of infection for South and Central America. In 1842, half of the population of the city died of the disease and it has had from 200 to 500 cases every year since. The campaign of extermination was begun in November, 1918. In December, there was 88 cases; by March, 1919, they had fallen to 17; in May, there were two, and none since. Thus was this hotbed of infection, for eighty years, cleaned up in six months. Space does not permit us to describe the details of the fight, some of which are very interesting; but, in view of the results, General Gorgas's ambition to write "The Last Chapter of Yellow Fever" seems to have been no Utopian dream.

The battle against hookworm and malaria, while less spectacular, has nevertheless brought health and hope to millions. These two diseases have cost many lives; but, for many more, they take out of life all energy and ambition leaving in their wake a trail of stunted bodies and darkened minds, so that death were often preferable. It is impossible to estimate the aggregate of new hope and brightened lives that will follow upon this work.

The grand total of expenditure for the year was almost a million and a half. The two largest items are, half a million dollars spent in fighting hookworm and in educating its victims in prophylaxis; and six hundred thousand dollars spent in fighting tuberculosis in France—also largely a campaign of education.

SUBINVOLUTION

It happens not infrequently that, after abortion and even after full-term delivery, the uterus does not become reduced to normal size; in technical language, involution

has been incomplete. The conditions due to subinvolution are too often regarded by the patient as an unavoidable evil and, consequently, the family physician is not consulted. Indeed, when he is asked for advice, he, too, sometimes dismisses the matter lightly, assuring the patient that it is nothing serious, and that a little time will make things all right.

This is a bad policy from two points of view. It is poor business and it is an injustice to the patient. Not only is it justifiable to make business by advising these patients to be treated, but it would be a good policy to warn every patient at the time of delivery, whether full-term or premature, that such a condition may follow and that timely treatment may have an important bearing on her future health. Many of the laity do not understand that a long train of ills may spring from this source. Educating the people with the view of preventing illness is being recognized more and more as the duty of physicians.

The causes of subinvolution are, infection during or after delivery, laceration of cervix or perineum, getting up too soon, lifting heavy objects (even the infant), much standing or going up and down stairs, prolapsus uteri and a few others. The last-mentioned condition is a part of a vicious circle. The more the uterus is displaced, the heavier it becomes from congestion; and, the heavier it becomes, the deeper it sinks into the lower pelvis.

The symptoms of subinvolution are numerous. The patient complains of backache and a sensation of weight in the pelvis. She often expresses it by saying that she feels as if everything was about to fall out of the pelvis. Some have a flow of blood which may vary from a slight oozing to severe hemorrhages. There is nearly always leukorrhea and, usually, general malaise and lack of energy.

The earlier treatment is begun, the more successful it will be. If lacerations are extensive, they should be repaired. The other treatment is medical and local. For the former, ergotin and quinine have long given good results and there is probably nothing better. By maintaining the tonus of the uterine muscular fibres, they promote involution. One grain of each twice a day is enough, but these doses should be continued for several weeks. Ergotin is much to be preferred to the liquid preparations, for this purpose. In obstetric work, where a quick action is desired, the liquid

preparations are better, but for prolonged administration they are more apt to nauseate and disagree with the stomach. Ergotin as found on the market is often inert and only the product of reliable manufacturers should be ordered.

Locally, there is probably nothing better than the daily, hot, vaginal douche of a solution of boracic acid—a saturated solution as hot as can be borne and given very slowly so as to prolong it as much as possible. A valuable addition to this treatment is the vaginal tampon of glycerin and boric acid. This necessitates more frequent visits to the doctor's office than the douche.

For the sake of health, medicines are taken by weight and measure; so ought food to be, or by some similar rule.—Skelton.

AS TO ENDOCRINES

As physicians, how little after all do we know! We are just able to name the endocrine, or ductless, glands, for instance; only in the case of the thyroid have we advanced far enough to make out the hormone that gives potentiality to its secretion. Very little, as yet, do we know of their functioning, so little that one of the best-informed of us does not even attempt in practice to determine precisely what gland is responsible for a certain disturbance. The undertaking appears to him much too difficult at present.

In applying the glandular derivatives, therefore, we are largely experimenting, which furnishes an argument for the pluriglandular prescription, especially if it be agreed that endocrine dystrophy is seldom confined to one gland but shared sympathetically by several of the chain. Intelligent selection being for the present impossible, the giving of two or three glandular substances concurrently seems advisable, as Harrower for example insists. With but a single weapon, we may miss; whereas with several we are the more likely to hit; hence, the shotgun prescription which some regard snobbishly but which in reality is quite legitimate in certain situations. Nor does the empiric prescription of a single or more than one remedy deserve to be frowned upon. Was not cinchona esteemed as a remedy for malaria, and deservedly so, long before anything was known of its action? Were not all acknowledged potent remedies first used empirically? Then, why the sneers?

Leading Articles

Synthetic Drugs in America

An Outline of Some of the More Important Synthetic Medicinal Chemicals Manufactured and Used in the United States

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THE last seven years have gone far to assure the independence of the United States in the manufacture of synthetic medicinal chemicals—an independence that has been achieved in a remarkably short period of time and which, in normal times, in the face of the competition and "dumping" of the German manufacturing trust, would have taken decades instead of years to bring about.

It is to be hoped that the severe lessons which have been taught during these years of war and turmoil will not be forgotten. All of us have vivid memories of the days when hospitals and physicians found themselves to be without the medicinal chemicals that they had come to look upon as necessities; when the suffering patient could not be supplied with the local anesthetic that would relieve his torture, nor the restless and sleepless unfortunate with the hypnotic to give him the longed-for rest.

In the midst of these needs and difficulties, the men of science joined hands with manufacturers; and be it said to their credit that these needs were supplied with products which were in many cases superior to the German products, and, *often at a much lower price*. Today there is scarcely a single important synthetic medicinal chemical which is not being supplied by American manufacturers.

In the following paragraphs, a brief résumé will be given of some of the important synthetic medicinal chemicals that have come into more or less extended use.

Local Anesthetics

Local anesthetics have long occupied a most important place in medicine and are

used in large quantities. Cocaine, a naturally occurring product derived from the coca plant, was the first local anesthetic to be widely used. In the Andes, where the plant is native, it has been utilized for centuries by the Indians to enable them to avoid fatigue caused by continued arduous labor. Most of our later developments in new anesthetics have been due to the careful and painstaking studies made of cocaine. A number of disadvantages must be chalked up against it, though, in spite of its value; for example, it is quite toxic; it cannot be sterilized by boiling—due to its instability; and it is habit forming—hence the necessity of filling out a Harrison narcotic blank every time it is used. A great advance was made when Novocaine (now being manufactured and sold in the United States as "Procaine") was patented and introduced by Einhorn, in 1906. For a great many uses, Procaine is far superior to cocaine; it is non-narcotic, only one-eighth as toxic, and much more stable. It is more extensively used for surgical and dental work than any other local anesthetic; and, considering its rather complex structure and the difficulties of manufacture, it is being sold at a very low price.

Soon after procaine was introduced, two products of French origin, Stovaine and Alypin, made their appearance. They have been widely used, stovaine in particular having been recommended for spinal anesthesia. Although they are still employed to some extent, particularly in France, they have not been found as effective as procaine.

Apothesin, a product of American origin

introduced during the war, has also found considerable use. A large number of other synthetic local anesthetics, which have been placed upon the market at various times, will not be mentioned, as they have never come into wide-spread or continuous use.

Despite the wonderful advances made in the production of effective local anesthetics, it must be admitted that, up to the present time, cocaine has stood preeminent for surface anesthesia. None of the synthetic products which had been produced were found satisfactory for this work, and their usefulness was therefore confined to injection anesthesia. Within the last two years, a great deal of work has been done to produce a satisfactory synthetic compound for surface anesthesia; after the production and pharmacological investigation of almost forty such new compounds, the efforts have met with success. The anesthetic which thus promises to replace cocaine from its last strong-hold, is structurally related to both cocaine and procaine; it is called Butyn and its chemical name is Para-aminobenzoyl gamma di-n-butylamino-propanol sulphate (U. S. Patent 1,358,751). Not only is butyn a rival of cocaine, but thorough clinical tests have shown it to be superior to it in practically every respect; for example, it is more effective, less toxic in effective doses; its solutions may be boiled without decomposition, it causes no dilation of the pupil of the eye, no drying up of its secretions, it is less irritant and much more rapid in its action than cocaine. The anesthesia caused by it is also of longer duration, and its solutions are slightly antiseptic.

There is another class of local anesthetics, which are insoluble in water, but are used in powder form for the relief of painful wounds, stomach ulcers, etc. To this class belong such compounds as Anesthesia, Orthoform, Orthoform-New, and others. Anesthesia is para-amino-ethyl-benzoate. The corresponding butyl and allyl (U. S. Patent 1,360,994) esters have recently been prepared and patented and have been found to be superior to anesthesia. Because of the insolubility in water of this class of anesthetics, they cannot be used for surgical work, but they have a field of their own in the relief of superficial pain.

Hypnotics

More or less sleep being necessary for the human being, the substitution of artificial for natural sleep, when the latter is

impossible, is a matter of utmost importance. Substances which produce artificial sleep are known as hypnotics; various types of such substances have been in use for many centuries. Alcohol was perhaps the earliest known hypnotic; it was not until many centuries later that opium came to be used for this purpose. However effective alcohol and opium may be, their undesirable by-effects have long ago led to their falling into disfavor.

The production of efficient and desirable synthetic hypnotics is comparatively recent, virtually all of them having been introduced within the last twenty-five years. The number of such compounds produced within recent years has been almost as abundant as in the case of local anesthetics, and their success has been equally gratifying. Diethyl-barbituric acid was one of the first synthetic hypnotics produced; it was given the name Veronal by its inventor, Emil Fischer, and is now being manufactured in large quantities in this country under the name Barbital. In doses of five to ten grains, it produces a natural sleep lasting eight hours, and is in general free from undesirable by-effects. It is used in greater quantity than any other hypnotic. A number of other barbituric-acid derivatives have been manufactured, among which may be mentioned Dial and Luminal, the latter being used in cases of epilepsy, although evidence seems to be lacking that barbital could not also be used for this purpose. As the result of recent work for the preparation of new barbituric acid derivatives, it has been found that Dibutyl-barbituric acid (U. S. Patent 1,331,712) is as effective as barbital, and slightly less toxic. It gives a natural sleep apparently without causing any undesirable after-effects.

Another class of hypnotics derived from ammonia or urea includes such compounds as Neuronal, Adalin, and Bromural; they all contain bromine, to which their action seems to be largely due. Adalin is said to produce a mild sleep free from the injurious by-effects common to so many of the other hypnotics containing a halogen atom in the molecule.

Acetone and other ketones have been used as the source of other valuable hypnotics, of which Sulphonal, Trional, and Tetralon are the best known. Passing mention must also be made of Nirvanol, a compound structurally related to barbital, which seems to be used in some quantities

in Germany and Switzerland; and of trichlortertiary-butyl alcohol (Chloretone) which is valuable for producing sleep in animals for experimental purposes. As already indicated, there are many other compounds, more or less effective as sleep-producers, but which for some reason or other have found only very limited application.

Antiseptics

Varied as have been the compounds that have run the gauntlet of medical use, the number of antiseptics has been even greater, and their sources have been more diverse. They have been obtained from the earth and the air; from plant and animal life; from metals or other minerals; from coaltar; from waste products—in fact, there seem to be few products known whose types have not been tried out. Out of this maze of possible antiseptics, a few simple ones, such as iodine, mercuric chloride, and phenol, have shown their worth and are widely used; yet, it would have been surprising if all these investigations had not produced something superior to these long-known simple products.

To an American, working to relieve the suffering and danger of the wounded during the world war, belongs the credit of making the greatest recent advance in antiseptics. That man is, of course, Dr. H. D. Dakin. In conjunction with Dr. Carrell, he found that solutions of sodium hypochlorite were particularly efficient as bactericides, and together they developed the technic of its application. Objections to the use of hypochlorite solutions, however, lie not only in the difficulty of its correct preparation and application, but also in its great instability. After an investigation to discover some substance which contains the chlorine in the necessary available form, and at the same time is stable, Dakin developed the use of the organic chloramines; namely, Chlorazene, Dichloramine-T and Halazone. Chlorazene is the sodium salt of p-toluene-sulphonchloramide, and is water-soluble. It has a phenol coefficient of fifty, as tested by the Hygienic-Laboratory method. The advantages of such high bactericidal power, combined with low toxicity and ready solubility, are self-evident. Dichloramine-T (toluene-p-sulphondichloramine) is insoluble in water, and is used in chlorinated-paraffin (Chlorcosane) solution. It is not as convenient to use as the water-soluble Chlorazene, but, for the irri-

gation of wounds, etc., it is remarkably efficient. Chlorazene and Dichloramine-T have very often proved their value in cases where infection had proceeded so far that amputation or death seemed to be imminent. Halazone (p-sulphon-dichloramine-benzoic acid), the third member of the series, is used for water sterilization. It is effective for rendering water sterile in concentrations of one part to several hundred thousand parts of water. All three of these products are manufactured from p-toluene-sulphon-chloride, a by-product in the manufacture of saccharin.

Recently considerable attention has been directed towards the use of organic dyes as antiseptics. The principal outcome of this work was the discovery, by Ehrlich, of two yellow dyes, Acriflavine and Proflavine, which seemed to bear considerable promise of being of therapeutic value. Acriflavine is 3.6 diamino-methyl-acridinium chloride, and Proflavine is 3.6 diamino-acridinium sulphate; their actions seem to be very similar, though perhaps proflavine acts somewhat more slowly and the action is more lasting. They are used in watery solutions varying in strength from 1:1000 to 1:8000. Thorough study by a number of English investigators, particularly by Browning and his collaborators, indicated that these compounds are very valuable, not only as general antiseptics, but also as specifics in the treatment of gonorrhea. They possess the unique distinction among antiseptics of not only retaining their bactericidal power in the presence of serum, but of actually having it enhanced in such a medium. Although acriflavine and proflavine have only recently been introduced by American manufacturers, they are already extensively used.

In this connection must be mentioned also the invaluable treponemecides, Arsphenamine and Neoarsphenamine, which were originally introduced by Ehrlich as Salvarsan and Neosalvarsan. These substances, which are used in conjunction with mercury compounds, as specifics for sleeping sickness and syphilis, require great care in their preparation in order to avoid the formation of very toxic by-products. They are being manufactured in this country, under Government supervision, in very large quantities and of a degree of purity never before obtained. The price, moreover, is but a fraction of what it was formerly.

It will be unnecessary to discuss antisepsics further, since the numerous other products which have been used possess no advantages over those already mentioned, and are, in general, less desirable.

Antispasmodics

Perhaps no other type of synthetic medicinals has come into general use so rapidly as have those used as antispasmodic. Until a few years ago, opium alkaloids were almost universally used for this purpose, even though opium contains alkaloids, such as morphine, which cause contraction of smooth muscle fibers instead of the desired relaxation. The tonus-relaxing constituents of opium are papaverine and its related compounds. Even when these are separated from the morphine type, they are not free from various objectionable features, one of which is the cost.

A study of these alkaloids by David I. Macht, of Johns Hopkins University, revealed the interesting fact that the relaxation of smooth muscle is caused by the benzyl radical of the papaverine alkaloids. This led to his introduction into medical use of the simple synthetic organic ester, benzyl benzoate, which has had such widespread application as an antispasmodic. It is non-toxic and is used, to mention only a few of its applications, for the relief of asthma, dysmenorrhea, spastic constipation, and numerous other spasmodic ailments.

In an investigation recently carried out to discover new compounds more efficient and desirable than benzyl benzoate, about twelve new benzyl esters were prepared and tested pharmacologically and clinically. Two esters of this series, benzyl fumarate and benzyl acetylsalicylate (U. S. Patent Application No. 431,608), show particular promise. The former combines the advantages of a rapid and prolonged relaxation of smooth muscle with an accompanying aspirin effect. It is of particular interest that the doses of benzyl ester and of acetyl-salicylic acid, obtained when benzyl acetyl-salicylate is administered, are in the correct proportions to correspond closely to their individual therapeutic doses. Benzyl fumarate possesses the advantage over benzyl benzoate of being a solid substance, and pharmacological tests also indicate that it is more effective than benzyl benzoate. A similar compound of promise, which does not contain a benzyl radical, is phenacyl acetylsalicylate (U. S. Patent Application No. 445,775). Two other benzyl esters

which have recently been introduced are benzyl stearate and benzyl succinate.

Uric Acid Eliminants

There are two types of substances designed to avoid the accumulation of uric acid in the body; the members of one of these types tend to decrease the formation of uric acid, while the second class dissolves it after it has formed. It has been found that certain substances, particularly organic acids containing many carbon atoms, are effective in reducing the amount of the uric acid formed. Salicylic acid and its derivatives particularly have been widely used for this purpose. Most uric-acid eliminants belong to the second class. The alkali carbonates have long been used, especially the lithium salts, because lithium forms the most soluble inorganic salt of uric acid. The merit of lithium, although its value in some cases can not be denied, has been greatly exaggerated. Among the earlier organic compounds belonging to the second class must be mentioned hexamethylene tetramine (also known as Urotropin) and piperazine. Both of these compounds and their derivatives have been and are still widely used, though some doubt has been raised concerning the value of piperazine.

Probably by far the most valuable uric acid eliminants are phenyl-cinchoninic acid (Cinchophen) and its derivatives. Cinchophen possesses the advantages of having analgesic and urinary antiseptic properties, as well as being a uric-acid eliminant. Novatophan, a derivative of cinchophen, possesses no advantages over cinchophen except that it does not possess the slightly bitter taste of the latter.

Conclusion

The value of these numerous products of various types indicates the remarkable advances made in modern therapy by the introduction of definite synthetic chemicals. Not only has this led to accuracy of dosage, but, since these products are single, pure substances, their actions are more nearly limited to the production of the effects desired. The future advances of drug therapy will undoubtedly be attained by the careful and painstaking investigations of the characteristics of naturally occurring products, followed by the syntheses of the active principles themselves or of other more or less similar substances superior to the naturally occurring products.

After Thirty Years—XXVI

Notes and Reflections on Life and Work

What Shall We Eat?

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

Is there any question before the public and the profession, today, of greater importance than this? I doubt it. I may say, in beginning, that I am not a vegetarian and, I do not think that I can justly be accused of being a "crank" on the subject of food; but, there are some astounding facts that are forcing themselves upon the world's attention and which it seems foolish to ignore. Government statistics show that, in the past four years, nearly 1,500,000 children under ten years of age have died in this country. As long ago as 1912, the U. S. Bureau of Education warned us that there were, in this nation, 400,000 children with organic heart disease; one million with tuberculosis; one million with spinal curvature; one million with defective hearing; 4 million were suffering from malnutrition; 6 million had enlarged tonsils or other glandular diseases; 10 million had defective teeth; and 15 million needed attention for physical defects prejudicial to health.

However, it is not only "the cry of the children" that falls upon our ears, dulled too long by indifference. The draft revealed the startling fact that, out of the 2,568,000 men available between the ages of 18 and 22, almost 800,000 were rejected as physically unfit for service. Almost one-third of our young men are "defectives." Is it not about time for us "to sit up and take notice?"

Then, every doctor knows that an alarming proportion of men have their lives shortened and their usefulness impaired by heart disease, kidney disease, rheumatism, liver disease, neuritis, prostatic disease, hardening of the arteries, high blood pressure and many others. I mention these particularly because, more than some other diseases, they result from injudicious eating, either in quantity or quality of food.

It is, of course, not claimed that improper diet is the only factor in the physical

deterioration of children and adults described in the foregoing. Still, there is a rapidly growing mass of evidence that it is the chief factor. The attention of scientific men has been attracted to the subject by several tragic occurrences in the past few years. Let us briefly consider a few of them.

The Story of the "Kronprinz Wilhelm" Retold

There was the case of the 500 sailors of the German raider "Kronprinz Wilhelm," in the late war. They were at sea 255 days, during which time they were well fed, according to the ordinary standards, except that they had no fresh vegetables and fruits. They had plenty of the choicest food taken from captured ships. There was abundance of fresh meat, ham and bacon, white bread, sweet biscuits, butter, cheese, lard, canned fruits and vegetables, potatoes, chocolate, tea, coffee, condensed milk and white sugar. Yet, they all suffered from acidosis to the extent that surrender became inevitable, because they reached a point where not enough men were left in fair health to work the ship. The milder cases suffered from weakness, anemia, shortness of breath, palpitation, nerve pain in various parts of the body, tenderness of the nerves under pressure, and swelling of the limbs below the knees. In the more severe cases, the patients showed, in addition, dilated pupils, swollen gums, cardiac dilatation, atrophy of muscles, and paralysis. Slight scratches bled uncontrollably and refused to heal; broken bones refused to knit.

Government medical officials from Washington came on board, made more or less of an investigation, went away and reported that the disease was beriberi due to eating polished rice! The men had had rice at only one meal out of twenty-one! Mr. Alfred W. McCann, food expert, went on board, studied the menu they had lived on, and pronounced the trouble acidosis

due to lack of vitamines in the food. He recommended that the men be given, at first, the liquid from steeping wheat bran, the liquid from boiling green vegetables, and, as they were able to take more, sweet milk, yolk of eggs, oranges, apples; in fact, any foods rich in vitamines including whole wheat bread. He advised that, until they were well, they avoid all the kinds of food upon which they had been living. Dr. Perenon, the ship's surgeon, followed Mr. McCann's advice, and the men promptly proceeded to improve, recovering without any other medicine. The mysterious disease had not appeared to any great extent among the officers, although all were anemic. They had occasionally had a few fresh vegetables taken from captured ships. The quantity of these vegetables was too small to be shared with the crew.

Tragedy Due to Another Deficient Nutrition

The Madeira-Mamore railway in South America furnishes another interesting episode along this line. It is a line about 240 miles in length between Bolivia and Peru, intended to open up a rubber country. In its construction, about ten years ago, the 6,000 laborers employed had to be fed by food brought in from outside as the jungle afforded little in the way of sustenance. The contractors supplied the men with food of which the main part consisted of canned meat and vegetables, white flour and white-flour biscuits. Four thousand of them died of symptoms identical with those suffered by the sailors of the German raider, although the sailors surrendered in time to save their lives. The local authorities pronounced the disease beriberi. In 1914, the company went into bankruptcy and, in the scandal that followed, efforts were made to hush up the affair and to minimize the extent of the tragedy, even claiming that only two thousand deaths had occurred. It seems certain that those four thousand men owe their death to a combination of greed and ignorance—the contractors having fed them upon the cheapest food obtainable; and everybody, including the twenty doctors employed by the company, being ignorant of the inevitable consequences of living exclusively upon acid-forming foods.

Experimental Feeding

In 1914, a food-poison squad was formed

Twelve criminals, six of whom were under sentence of death, were fed exclusively on degenerated and demineralized corn products, with the understanding that their voluntary submission to the experiment should produce mitigation of their sentences. In six months, several had developed pellagra, and all showed symptoms similar to those already mentioned. Then the governor pardoned them all. During the test, their sufferings were such that several committed suicide and others asked to be permitted to abandon the test and go back to serve their original sentences.

In 1912, in Billibid prison, Philippine Islands, 29 criminals under sentence of death underwent a similar experiment. They were fed chiefly on polished rice. Result, the same development of acidosis, the same sufferings. There it was called beriberi. When the diet was changed to natural brown rice, they promptly got well.

Arctic explorers have had similar experiences. When the men were supplied with vitamine-bearing foods, they remained in good health. When they depended mainly on acid-forming foods, they developed edema, weak heart, short breath and all the rest of the list.

Peary, in 1909, took white flour, white biscuit, white sugar, bacon, coffee, tea, condensed milk, dried fish, and pemican. The latter is the only one of the list fairly rich in vitamines. From the commander down, they all suffered more or less from the symptoms of acidosis; especially, bleeding from the intestines.

Donald B. McMillan, who was with Peary, was later the leader of the Croaker Land Expedition in 1913-17. McMillan took whole-wheat biscuits, whole-wheat flour, dehydrated vegetables including potatoes, rhubarb, turnips, spinach and onions; also dehydrated soups, apples, apricots, and prunes; dried peas, beans and raisins. (Dehydrating does not destroy the vitamines; canning does to a considerable extent). Among their supplies were also brown sugar, baked beans, nuts, dates, figs, lime juice and grape juice. McMillan and his crew remained in perfect health.

Numerous scientists in many countries have experimented upon animals, feeding them exclusively upon white flour and other foods lacking in vitamines: always with the same result—the animals suf-

fered in health in a manner similar to human beings under the same circumstances, death supervening if the experiment was prolonged.

Acidosis the Inevitable Result of Vitamine Deficiency

Such an array of facts justifies a careful examination to find out their true significance. There seems to be pretty general agreement that the bodies known as vitamines are the key to the whole matter. To define these bodies, I quote from my article on vitamines in this journal, November and December, 1919, as follows:

"Under this loose but exceedingly comprehensive term are classed certain mineral salts, colloids, and other organic compounds, especially those of calcium, potassium, iron, and phosphorus found abundantly in fresh vegetables, leafy grass, and fruits; and in some animal substances, especially milk, egg yolk, blood and bone marrow. When a diet robbed of vitamines by high milling, sifting and bolting processes, or by the application of heat sufficiently intense to decompose these complex bodies, or by the action of chemical preservatives (thus rendering them inert) is persisted in, a condition of acidosis is gradually established in the system, which inhibits growth in the young, destroys resistance to disease, and is ultimately followed by symptoms apparently closely related to those of scurvy, pellagra, peripheral neuritis, and beriberi."

If I were to make any change in this definition, it would merely be to emphasize the importance of the calcium salts, because the victims always show lime starvation of the tissues; and also to emphasize the fact that one of the most abundant sources of vitamines is the bran of wheat. Every year adds to our knowledge of these bodies. They exist in many forms, at least three of which have been pretty thoroughly studied, each serving some particular function in nutrition. One of them is soluble in fat, the other two in water. Lack of the former produces rickets in children; lack of the two latter causes scurvy and beriberi.

It is interesting to recall that, away back in the forties of the last century, arctic explorers had dim glimpses of a great truth. In those days, scurvy was almost inevitable on long sea voyages. On one of the ex-

peditions sent out to search for Sir John Franklin, the commander carried along earth in window boxes and the seed of lettuce, mustard and turnip. During the long arctic winter, these were planted in the warm cabin of the ship and the young leaves made into a salad for the men who were attacked with scurvy. Though the quantity was small, these precious leaves, rich in vitamines, saved human lives. That commander was closer to a great discovery than he knew.

Rational Diet Insisted on Long Ago

For more than fifty years, an occasional voice has been lifted in favor of preventing disease by means of a rational diet. Among these pioneers were Sylvester Graham, Dio Lewis, James C. Jackson, and, incidentally, Henry Ward Beecher. I say, incidentally, because Beecher's fame rests principally upon his eloquence as a preacher and orator. However, in preaching righteousness, he freely emphasized as a religious duty temperance in the use of plain and wholesome food, and condemned the excessive use of meat; he often asserted that it was hard for a dyspeptic to be a good Christian, and that an ugly temper was often the direct result of a disordered stomach and liver.

Origin of Graham Bread

Sylvester Graham (1794-1851) was a Connecticut clergyman, who advocated the use of unbolted wheat flour. He, of course, in those days, knew nothing of the chemical reasons for his belief; he simply found by observation that whole-wheat bread was more nutritious and wholesome than white bread, and that bolting removed the most valuable part of the grain. It is a fitting tribute to his memory that whole-wheat flour and bread should be named after him; it is unfortunate, though, that what is sold as Graham flour is too often far from being the real article. Many people imagine that white flour with a little bran mixed in is Graham flour; others get wheat ground so coarsely that it is merely what millers call "chopped stuff." No wonder so many people do not like "Graham flour." Graham insisted that the best quality of wheat should be ground "as fine as stones can grind it," and that then nothing should be taken out.

During the war, the millers asserted that whole wheat flour will not keep. Experi-

ence shows that, under proper conditions, it will keep as long as any flour ought to be kept.

It has been asserted, too, that "The American stomach will not stand whole-wheat flour." That is rather a strong assertion in view of the large number of stomachs that are standing it, and enjoying it, too. There are a few diseased stomachs that are irritated by any article of food that is slightly rough, like bran, cornmeal, toasted bread or berry seeds; but, the great majority of stomachs are distinctly benefited by the use of Graham bread and porridge if the wheat was finely ground. For constipation, it is one of the best remedies, especially if a liberal quantity of pure water is taken.

In 1872, I spent some weeks at the sanatorium of Dr. James C. Jackson of Dansville, New York, and had the opportunity of studying his teachings and methods and their effect upon more than 200 patients, mostly chronic cases of all sorts. The results were interesting and many of them quite remarkable. No drugs whatever were used, water-cure (hydropathy) taking their place. The diet was strictly vegetarian—no meat, eggs, milk, butter, cheese, nor animal food of any kind. Graham flour, made up in various forms, was the main article of food, with simply cooked vegetables (no salt) and fruits cooked with a minimum of sugar. My observation of

these patients under treatment (and of some of them for several years afterwards) convinced me that many of them, especially the children, suffered from malnutrition and greatly lowered resisting power to disease. Among other conclusions I formed the following:

1. Whole wheat flour is greatly superior to white flour.
2. To deprive children of milk, cream and butter is almost a crime.
3. Adults thrive best on a mixed diet, although most people should eat far less meat than they do. Of course, in those days, we had never heard of vitamines or calories, and consequently did not appreciate the true value of fruits and vegetables.

The pioneers in dietetic reform were groping their way towards the light. They had grasped the great truth that disease was largely avoidable and that diet was the chief factor in preserving health. Unfortunately, they had this great truth tangled up in a maze of theories that delayed the progress of the reform. They were usually called cranks, and some of them were such.

Some of the facts used in this article are drawn from "The Science of Eating" by Alfred W. McCann, which is reviewed on another page (p. 415). I shall discuss other phases of the subject in a future article.

The Balanced Ration

By EDWIN F. BOWERS, M. D., New York City

Author of "Side Stepping Ill Health," etc.

THREE is no subject in the world on which the average known being, including the average physician, has a larger assortment of variegated misinformation than the subject of diet. The selection and the preparation of nutriment are to them Eleusinian mysteries. This is all the more lamentable because of the fact that the longevity and the efficiency of the human race is more deleteriously affected by this ignorance than by any other single cause—not excepting the stupid, bestial cause called War.

Yet, there is no question the facts of

which (allowing a small margin for idiosyncrasy) should be more definitely established than the selection of a proper diet.

For, after all, the adaptability or the non-adaptability of a given ration to a given individual is merely a question of chemistry, food utilization, and oxidation reduction. The answer to the problem as to each individual's ability to utilize and oxygenate any or all items of the nutriment he is getting lies in the ratio between his output of urea and uric acid, and in the amount of putrefactive fermentation he may develop from any particular food

product; as is evidenced by the appearance or the increase of indican in the urine.

This veracious and indubitable proof of the correctness of choice in the diet is so simple and obvious that only about one man in 10,000 knows anything about it or thinks anything of employing it as a routine guide in clinical practice—to point the way to a more perfect nutrition in the particular patient under observation.

Chasing the Ignis Fatuus Through the Dismal Swamp

One regrettable feature in this connection is, that we have been chasing a fat flock of *ignis fatuuses* and mirages all over the physiological landscape in an abortive attempt to rope and hog-tie a real idea. We have tried as assiduously as a one-armed paperhanger with pruritus to measure food requirements in terms of heat units, figuring caloric values to replenish items that haven't any more relation to actual body needs than a pterodactyl has to a load of hay.

Of course, the interesting episode in relation to the *Kronprinz Wilhelm* and its crew, who were starving to death on a high-calorie diet, and the recent researches of McCollum, Davis, Wm. H. Porter, and others who are bringing light into dark places, have cast an illuminating ray into the dismal swamp of food fatuousness.

But, it takes a long time for an idea to mature to any sizable proportions. Meantime, human beings are dying the death, primarily brought about by trying to live on "refined" foods, foods totally deficient in calcium, potassium, phosphorus, iron, magnesium, sulphur, chlorine, and the nucleins.

They don't get these substances in the "white bread" that they have been taught to demand for every meal and which, in their almost hopeless ignorance of food values, they can hardly be coerced to relinquish.

Nor do they get the nutrient elements in "pearled" barley, degerminated corn meal, "breakfast foods" made from relatively non-essential parts of the wheat, polished rice, white crackers and biscuits, scoured oatmeal, and other foods that have been robbed of vital elements in order to cater to vitiated appetites and a false sense of what is artistic in food appeal.

Nervous systems are starved, brains are

robbed, blood is exsanguinated because our populace insist upon living on degerminated and demineralized food products.

The Thriftless Housewife Continues Her Thriftlessness

However, the thriftless housewife will, no doubt, continue merrily to peel the potatoes or other vegetables, boil all the organic salts out of them and pour them down the sink. Then she'll pay some doctor to prescribe phosphates, calcium, iron, manganese, or what not, chasing the trail of her ill-health madly through the circuitous gauntlet of specialedom.

And, perhaps, none of these specialists—who might, without batting an eye, tell her all about indirect paracentesis, homologous bacterins, or passive diaplacental immunity—ever volunteers a suggestion concerning the dietary crime of eating acid fruits with meals, or indulging in potatoes where there is deficient oxidation reduction of the proteids, or failing to partake liberally of red meats and easily transmuted nitrogenous forms in conditions complicated by nephritis, diabetes, rheumatism, high blood tension, and other disorders due to underoxidation.

In point of fact, in these latter conditions, the average medical man would, likely as not, interdict just these particular items of diet, insisting that the patient live on fruit, vegetables and other foods which were probably responsible for bringing about her trouble in the first place.

In the matter of food preparation, the medical profession as a whole is equally remiss. Consider, for instance, the extensive use of lard and animal fats in cooking and frying. We know that, owing to the relatively low temperature they can sustain without smoking, these substances soak into the cells of the meat, vegetables, or other food that are prepared with them, and favor imperfect digestion and under-oxidation of these foods.

They are the direct cause of a host of conditions that demand medical attention.

The use of a pure corn oil in frying or cooking will, in an overwhelming proportion of these cases, obviate the possibility of these conditions developing. It will tend automatically to cure thousands of patients who are now erroneously classed as "chronics".

The failure of the medical profession to

deal authoritatively with all these matters has let down the bars for a cohort of weird propagandists who find in starvation or in a diet consisting exclusively of vegetables, or fruit, or nuts, or milk, or chopped door mat, a panacea for all the ills of mankind that medical men generally have had only indifferent success in dealing with.

These gentry, it must be admitted, help a certain proportion of their cases. For, fresh air, daily baths and exercise, a respite from stuffing, sunlight, suggestion, change of scene and temporary freedom from business cares or household responsibilities are indubitably potent for good. They help a certain number back to health.

Ballyhooing Bellwethers

And, that certain number make up the ballyhoo which sends thousands of other sufferers to try a little of the same—with results that makes countless thousands mourn and sends the great gods of Olympus into convulsions of ironic laughter.

The most vehement of the cults of propagandists are the vegetarians who firmly believe that, if one but eats enough hay, and thinks thoughts sufficiently altitudinous, the task of levitating over the fence by the aid of a large pair of bootstraps is an airy trifle.

Now, we need protein, carbohydrates, fats and mineral salts, and the proportions in which we need them have been pretty well worked out by Rubner, Wright, Atwater and other able men.

If we take these in a form in which they can be utilized with the least expenditure of digestive and dynamic energy, consistent with giving the organs of digestion and assimilation a normal amount of work, we'll have just so much more energy to devote to something besides converting foodstuff into pabulum and getting rid of the débris.

All foodstuffs are important. But, protein—which we must have in any event, whether we obtain it from beef or alfalfa—is the most potent for harm when insufficiently oxidized. This, however, is only the more reason for taking it in that form in which it can be most readily converted and oxygenated.

What an Authority Says about the Matter

Professor William H. Porter, in "Eating To Live Long" (which, in my opinion contains more helpful "horse sense" than

any book on diet ever written), says in discussing this matter,

"Proteids are the undisputed champions of the body's poison squad. This does not mean that they should be eliminated or even curtailed, but only that they should be thoroughly digested; and the most certain way to insure their proper digestion is, to take them in their most digestible form—meat (preferably beef), eggs and milk.

"Only 2.8 percent of beef is lost in its passage through the alimentary canal; 2.9 percent of eggs, and 5.7 percent of milk; as against 80 percent of the protein of oats, for instance, which passes undigested through the alimentary tube of the sturdy Scot, filling him full of the gases of fermentation the while. The same ease of digestion holds true for all the animal foods; but the three here mentioned are the best for practical utility."

Also, "Anyone who lives upon plant food exclusively eliminates unused a much higher percentage of his nutrient material than one who combines his vegetables with a little meat."

Atwater, experimenting upon himself, found that on a purely vegetarian diet 28.26 percent of the nitrogen substance of the food was passed in the feces.

When, however, a moderate amount of animal food was added, the assimilation of food substances was markedly improved only 11.59 percent being lost. With an adequate amount of animal food added to his dietary only 8.88 percent was lost.

No competent physiologist now doubts that it is impossible to maintain the nitrogen balance of the body with an exclusive vegetable diet. These are conclusions that might well give the hardiest vegetarian pause—if he be not blinded to scientific values by a frenzy of fanaticism."

What is true of vegetarianism is equally true, if not more so, of any other ism.

It's all so wonderfully simple. And, yet, we'll go blundering on, failing to see the forest because of the multiplicity of trees.

There are many hopeful signs and portents smiling into the horizon, however. For instance, a fractional part of the great public itself is demanding to know what's what—and how much of it is what.

A Practical School of Cookery

Also, men like Dr. C. Houston Goudiss, writer and lecturer, and talented editor of

the *Forecast Magazine*, Osborne and Mendel of Yale, and Professor Lorand are accomplishing wonders in bringing the public to a realization of balanced ration requirements.

Dr. Goudiss has lectured on practical food economics to probably more than a million women, while his books and helpful magazine articles reach many other millions.

In the "Forecast School of Cookery", which he has established in New York, Dr. Goudiss and his aides provide a scientific knowledge of food, food values, and cookery. In a clear and understandable way, Goudiss and his aides demonstrate food economics to classes of hundreds of women weekly—without one cent of expense to any of the women attending.

The women are taught the fundamentals

of a balanced ration, and the best and most economical method of preparing this ration.

Dr. Goudiss is showing in this admirable school that it is possible even to meet the present exorbitant prices of foods in a practical way, by utilizing low-cost foods, by intelligent purchasing and by careful food preparation.

Also, instruction is given concerning the selection and use of modern household devices that tend to make work easier and aid in solving that carbuncle in the neck of Progress, known as the Servant Problem.

All in the right direction. And all producing a modicum of ripe fruit yearly. But, the way is long. The task is Augean.

It behoves every man who has the welfare of human beings at heart to find out what can be done by a little intelligent application. And, then, to do it.

The Vitamineless Diet:

A New Problem for the Doctor

By HENRY B. HOLLEN, Ph. G., M. D., Chicago, Illinois

ALTHOUGH it is not known as yet precisely what the vitamines are, chemically, and though it has been impossible to isolate them except in an impure form, we know positively that they exist. They are present in certain fresh vegetables and other foodstuffs. We have also a pretty clear idea of the purpose which they serve in the nutrition of the body and of what happens when they are withheld.

Most of our knowledge has come within the last dozen years or so. Before, we had only a hint from scientists that, besides proteins, carbohydrates, fats and mineral salts, there was something no less vital in fresh foods, but, so far, unsuspected. Among the first to investigate the matter methodically was Professor Hopkins, of Cambridge. To one set of rats, he fed the several components of milk as disclosed by analysis. The rats lost weight and became sick. To another set, he fed these same substances plus a few drops of whole fresh milk. These rats thrived and, for a time, showed a steady gain in weight. Then he reversed the experiment, with the result that the first set gained and the second lost.

A clew to that vital something was found by Eijkman, a Dutch physician stationed in

Java. His fowls became suddenly sick. They were being fed with polished rice left over in the hospital kitchen. By way of experiment, he fed them rice in the natural state. The fowls immediately recovered. He further observed that prisoners subsisting on a diet of polished rice fell sick with the corresponding disease which, when afflicting humans, is known as beriberi; but, that they recovered when whole, or unpolished rice was given them.

This showed clearly that beriberi was caused through lack of that vital something which was contained in the outer coat of the grain.

Next came Casimir Funk. He tried to isolate the substance in question, or "vitamine", and did succeed in getting it in an impure state from yeast. From 200 pounds of yeast, he secured a small amount of material, a few grains of which, when fed to paralyzed pigeons along with polished rice, cured them in less than a day.

This substance, in the outer coat of rice and cereals in general, is now called *water-soluble B*.

Three Kinds of Vitamines

There are in all three kinds of vitamines. This fact has been brought out by such

laboratory workers as McCollum and Melanby. The other two are "fat-soluble A" and "water-soluble C." All have a bearing on nutrition. The absence of fat-soluble A is the chief if not the sole cause of rickets. Beriberi, as already shown, has been traced to the want of water-soluble B in the diet. Scurvy attacks those deprived of water-soluble C. These are known as deficiency diseases. Pellagra is another, in which both protein and vitamine shortage figure. And, according to the latest view, so is pyorrhea. Talbot, an authority on the subject, writing in this journal (February issue, p. 92) recently, regards it as an early or incipient form of scurvy, due primarily to lack of vitamine bodies. Besides, many cases of stunted growth and ill health in the past, vaguely said to be due to malnutrition, are now to be laid to lack of vitamines.

How do the vitamines act? The most plausible view is, that they act as enzymes, by their presence starting or accelerating the body activities which have to do with the digestion and absorption of the food eaten. This is the view taken by Walsche and other investigators.

Without Vitamines, Foods Do Not Satisfy

The word vitamine means "basic to life." It very properly indicates how necessary vitamines are to the living person. If deficient in the daily fare, either wholly or in part, the consequence can not be other than bad. Ordinarily, the average person gets some vitamine in his food, enough to keep him alive. But, he does not get all he needs to keep him physically sound and at his best. This is especially true of the city dweller whose fare is almost always lacking in the required amount of one or all three vitamines.

It does not suffice, as was once believed, merely to have a supply of fats, starches, proteins and water. The old notion is obviously wrong. To be sure, these substances are needed; but, without the vitamines, they are not utilized or assimilated in any complete or proper sense. That is why one may be well fed and still not be well nourished, why one may eat ravenously and still be thin even to the point of emaciation. It is not bulk alone that counts in the diet; a person without his supply of vitamines is in reality a starved person and in most instances shows some evidence of it. He may never develop scurvy, as sailors and explorers do who are deprived for

a long time of fresh fruits and vegetables; nor xerophthalmia, which follows when the fat-vitamine is long deficient in the diet; nor actual rickets. Still, in some way, to some extent, his health will be injured.

The leading authorities on nutrition support these views, and experiments in the laboratory with mice, rabbits and pigeons, made time and time again by trained observers, prove beyond dispute that normal growth and good health are only possible for that person who receives his full daily quantum of the vitamines. The point to remember is, that deprivation for any considerable length of time affects the organism injuriously, whether the injury be recognizable or not. In early nutritional disease, a set of symptoms clear enough for a diagnosis may not develop. It usually takes six months for infantile scurvy to reach a stage possible to recognize clinically. Then we have the picture quite complete: stationary weight, rapid pulse and respiration, capillary effusion, tenderness along the bones, the hemorrhagic rim about the incisors, and the rest. Rickets is a long time developing and, in some persons, the real trouble may be not indicated by such ordinary signs as pallor, susceptibility to colds and habitual coldness of the extremities.

The Food Vitamines Killed by Cooking, Canning, Etc.

Because the vitamines occur in the foods commonly eaten, it might be thought that one obtains them in sufficient quantity from this source. But, this is not so. Nearly all the things that go upon the table in these days are previously robbed of their vitamine content, partially or wholly, by the cook or the miller or by other person concerned in their preparation.

This part of the subject is of practical interest to the doctor and dietitian. Some are led to make light of it by the statement that "there is no need to worry when foods rich in vitamines are so easy to add to the diet and only an infinitesimal amount of each is required anyway." At times, the subject is dismissed with advice too general to be profitable. For that matter, advice is easily given but, often, hard to follow. To avoid shortage of the fat-soluble vitamine, for instance, we are exhorted to partake liberally of milk, eggs, fruit and leafy vegetables. Yet, how many find themselves in position to do this?

Milk is rich in the fat-soluble vitamine

and less so in the others. That, though, means fresh raw milk only. For, unfortunately, this vitamine, when heated in the presence of air, largely loses its power to promote growth. It also deteriorates in storage. These changes are attributed by Hopkins and others both to heat and oxidation. At any rate, the vitamine is for the most part lost in the pasteurizing process as commonly carried out; still more is lost when the milk stands a day or two after pasteurizing. Since the supply in cities is of this sort, it is necessarily of low value. So, too, is skimmed milk. Nor is much to be expected from the canned product, insofar as the vitamines are concerned, although evaporated milk has its place in the world, especially where fresh milk from healthy cows is difficult to get or where it quickly sours under a torrid sun. Milk evaporated by slow heat parts with most of its vitamine. As to the dried product (milk powder), unless prepared by the quick-drying method it is very poor as a source of vitamine. To conclude, neither the pasteurized nor condensed nor powdered article is the equivalent of fresh milk.

As much of our butter is made from pasteurized milk or from milk shipped for some distance and allowed to stand in cans awhile before churning, what has just been said applies to this milk-product as well. Refrigeration is baneful. Steenbock found that butter aerated for 12 hours at 100 degrees showed a decided vitamine loss.

And, what of margarines used as substitutes for butter? Of them, one can only say that, while commendable as a source of fuel reserve for the body (fats), they must not be looked to for a source of the vitamines. Nor does lard contain enough of these bodies to mention. And, while the oil-soluble vitamine (A) is present universally in green vegetables, it does not necessarily accompany oils such as olive oil and cottonseed oil when these are expressed or extracted.

Let us pass to other things in the ordinary fare. Wheat among other cereals contains the water-soluble (B) vitamine but only in the outer layer and the germ of the grain. In the milling of white flour, these parts are discarded; therefore, bread and rolls made from ordinary white flour afford little or no vitamine. Pigeons fed on white bread, in Simpson's experiments, died after an average of 29 days, with an aver-

age loss of weight of 26 percent and after having developed paralytic symptoms. Nor does corn meal, or grits, of the finely milled variety serve any better.

Coming now to vegetables, these are adequately useful for their vitamines only when fresh; that is the rule. When cooked, canned or pickled, they are deprived wholly or in considerable part of these substances. It is true that some vegetables stand heat better than others (as, tomatoes) but, with scarcely an exception, their vitamine value is materially lessened, the more so when baking soda is used; also when they are cooked under pressure, as is done in canneries and other places where they are prepared on a large scale. Cabbage, when cooked, loses two-thirds of its water-soluble (C) vitamine. Beans, cooked for 30 minutes, lose nearly one-half of their vitamine content. Potatoes, when steamed or boiled, also lose a large part of their water-soluble (C) vitamine, whereas they are fairly rich in it in the raw state. Much is discarded in the peelings and in the cooking water, also.

During his arctic expeditions, Stefansson came to have a low regard for canned fruits and vegetables. In one of his books, he concludes that canned tomatoes are of little or no value against scurvy, whereas fresh tomatoes rank with the orange as one of the best preventives. Nor are old potatoes of much use, nor is commercial bottled lime-juice.

How to Make Good the Vitamine Deficiency

Plainly, then, the vitamine requirements of the body are seldom met by the ordinary diet, especially that of the city dweller accustomed to taking many or all of his meals in the restaurants. In the home, such needs may possibly be supplied although that would entail special care in the preparation of all that goes upon the table, and at an expense that comparatively few families could afford. For, fresh vegetables and fruits are scarce in winter and, when bought out of season, are usually expensive as well as inferior in a nutritive way. It is significant that growth in children is most pronounced in the spring and least so in winter. This indicates a stunting of growth in that season, which is partly made up when the vitamine intake is proportionately increased again.

Another difficulty in the way of people getting their vitamines from food is, that

so many incline toward a one-sided diet, refusing this or that food because it does not suit the taste; and, taste is largely a cultivated factor. This person will eat no eggs, say, while that one absolutely refuses milk except perhaps in coffee, and then in the smallest quantities.

That is why it becomes necessary to supplement the diet for many persons with the vitamines as such in concentrated form, and this can be done. For, although they are not to be isolated as yet, in the pure state, they can be derived from their natural sources and compressed in cakes, wafers or tablets for this purpose. Many are advising the ingestion of yeast; and yeast is good as far as it goes. But, one must remember that it contains only the water-soluble (B) vitamine, leaving us still in need of the fat-soluble (A) and the water-soluble (C). If all three could be supplied within the compass of a tablet or wafer or lozenge, or even provided as a powdered combination to be sprinkled upon our porridge, into our soup or other dishes, the problem would be solved. In fact, it has apparently been solved by enterprising chemists. Already, both tablet and pulverulent preparations are being offered, the tablets in several instances being pleasantly flavored, in some carrying lime, iron and other elements which, as we know, are likewise often deficient in our common foods. Such combinations are logically conceived.

The Vitamine Hunger Signs Are Not Always Clear

Visit almost any large factory or orphanage or department store, or scrutinize any street crowd, and the most striking signs of vitamine hunger are seen at a glance. Collectively, the doctor reads them as manifesting malnutrition. These people are generally well enough fed, even overfed; still they show more or less plain evidence of being undernourished. Some, it is true, eat skimpily, either because they have no appetite or from a desire to economize; this is especially true of working girls in the cities, whose earnings sometimes are deficient to cover their needs and whose vanity in other cases leads them to spend too much for fineries in dress.

More often, the food intake is ample enough. Most people eat three meals a day which, in terms of ounces, are rather too large than otherwise. The trouble is that the items comprising the meals are not

suited to the bodily needs. Instinct guides one in eating; and by eating a variety of foods one's needs would probably be met were green vegetables, whole cereals, fresh eggs and milk, etc., readily obtained. It may be news to some to learn that many restaurants in such a market center as Chicago serve canned peas, beans, corn and other vegetables to their patrons even in the summer season.¹ In the circumstances, then, we may expect malnutrition from vitamine deficiency, manifesting itself by such signs as: underweight, thinness, pallor, habitual fatigue, lack of endurance, cold extremities, susceptibility to weather changes and infections.

Low resistance is often associated with an undernourished state, and primarily is thought by many to be due to vitamine shortage.

Thinness and emaciation (marasmus) is quite common in growing children whose requirements are not being met. Many are not only thin but also undersized. They need the growth-stimulating vitamines. When these are supplied, a change takes place which at times is striking.

No doubt, marasmus in bottle-fed infants is chargeable to the use of milk and milk-and-cereal mixtures that are both poor in vitamines. The milk is usually the pasteurized or sterilized variety; often it is skimmed or diluted. Even raw certified milk is open to the objection that sodium citrate is added to it, a practice that very largely reduces the antiscorbutic value of such milk. Hence we find, in spite of strenuous efforts to modify the cow's milk by addition or subtraction of one or more composing elements, many sorry-looking babies, many puny, sore-eyed, peevish, having a hard fight for life, which often is lost, as the mortality record shows. When the vitamines are added to the contents of the feeding bottle, the infant usually begins to improve. Good results are often to be had by supplementing the milk diet with orange or fresh tomato juice (after the first few months) or, better still, by adding a compound vitamine powder or the pulverized tablets to the food.

In times of stress, vitamine hunger is

¹During a recent trip to California, where fresh vegetables and fruits were stacked high in the markets, the Editor was told, in a restaurant, that it cost too much labor to prepare fresh vegetables for cooking; therefore, they served the canned products!

more than ever a matter for concern. During lactation, for instance, it is imperative that the mother be well and sensibly nourished. So, too, while convalescing from a serious illness or fated to worry, distress or hard work, the organism is apt to break if the food intake is not what it should be. Anemia in youths; sore eyes, bowleggedness and slow growth in small children; chronic thinness, irritability and asthenia in women still in the prime of life, all are probable signs of vitamine deprivation.

It is often noted that some thin people eat ravenously. Is it a natural craving for vitamines, which never is fully satisfied, that drives them to excess? Presumably, they strive to get their requirements by eating bulk, which is bad, in that the digestive and eliminating organs are overtaxed in consequence; and we find them suffering from a loaded colon and from indol toxicosis.

The idea is not illogical if we assume that the vitamines have to do with the utilization of food ingested.

The extreme consequences of deficiency, such as scurvy, are easily recognized. Such ailments, in their beginning, may quite as easily escape notice. I have already stated that it usually takes about six months for a case of infantile scurvy to reach the stage where it is clinically obvious, according to Hess. The gum symptoms are among the first. So, too, besides those infants with well developed rickets, there are countless others, no doubt, who are ricketty without being recognized as such, but who suffer from vitamine deficiency.

The vitamineless diet of our day, therefore, presents a vital problem for the practitioner. He must visualize it back of the complaint which the patient brings with him, and make good its lack.

Pellagra

By. J. C. DENSTEN, Ph. D. M. D., Scranton, Pa. .

THE word pellagra is derived from the Latin word *pellis*, meaning skin; plus the Greek word *agra*, catching; or *ago*, to pursue.

Pellagra does pursue the skin. Its characteristic skin lesion is the one impressive pathognomonic symptom of diagnostic certainty and is the only true symptom by which we can positively establish our diagnosis. Unfortunately, this objective symptom does not appear in pellagra until the chronic stage of the disease has been entered. When we shall become able to diagnose pellagra in its incipiency, much suffering will be spared the patient and a more speedy cure effected.

There are two varieties of pellagra as applied to objective symptoms: (1) There appear papules which may become vesicular, with blisters, producing the wet, or moist variety of skin lesion; (2) a dry variety obtaining from a very light olive to brown and from bluish to blackness of the cuticle, often extending well into the corium. In the dry variety, the pigmentation and discoloration of the cuticle is often mistaken for sunburn, or tan. It does not extend along the attenuated fingers further than

midway of the first phalanges and upwards to one-third or more of the forearm.

These skin lesions are the result of acidosis. The acidemia causes a reaction with the blood constituents and the formation of a pigmentary product in the cuticle, through oxidation, when exposed to the air and the actinic rays of the sun; thus is produced the "pellagrin mask" of the face and neck, and the discolored skin of the hands extending upwards, often to one-third or more of the forearm. The same discoloration is often seen on other exposed surfaces of the body but is never observed on the volar surfaces of the hands or feet.

Etiology

Many and varied have been the causes attributed to pellagra. (1) the bite or sting of the simulium repts; (2) the bite of the cimex lectularis (bed-bug); (3) autointoxication and autotoxemia; (4) ptomaine poisoning; (5) diseased maize; (6) an exclusive diet of any article of food; and (7) protein toxemia. The statements concerning "corn as a causative-dietetic factor" and "an exclusive diet of any one article of food" in producing pellagra are in direct line with the physiochemical ex-

planation presented in the following. I have also observed that the symptoms accompanying autotoxemia and ptomaine poisoning often correspond to those accompanying pellagra, especially if the pellagrin has enteroptosis accompanied by meteorism that is so often an occurrence with the aged.

Physiochemical Explanation

In pellagra, we find both objective and subjective symptoms and abnormalities. Gastrointestinal troubles with abnormal functioning, great nervousness and hyper-excitability, mental vagaries, pigmentation of the cuticle, water-brash, burning throat and tongue, general malaise. A high blood pressure is the rule, unless associated with myxedema, Bright's disease or diabetes mellitus, when hypoadrenia may prevail and the subject register a low blood pressure. The temperature of a pellagrin is often subnormal, due to acidosis or gastrointestinal trouble or both.

What is the scientific answer as to the etiology of these abnormalities and perverse conditions? When we can answer this question, it will not be so difficult to benefit and cure a pellagrin by physiochemical therapy scientifically applied.

We know that the gastric juice is acid, that the epigastric region beginning with the duodenum should be alkaline. Suppose we acidify the epigastric region, what will happen? Just what happens to a pellagrin; similar gastrointestinal troubles. Why? From ingesting too much acid-forming material. What? Too much starch and starchy food (carbohydrates) and fats (hydrocarbons) and cereal breakfast foods which have been partly degenerated by heat, whose end products result, through fermentation, in acetic and butyric acids. To these foods, are often added tea, coffee, chocolate well sugared, and oils; salads and vinegars and other condiments; then, wine and alcohol; all of which aid in fermentation, thus causing hyperacidity. How shall we correct this condition? Cease to ingest more than just enough carbohydrate food to become consumed with the nitrogenous food we ingest; which is approximately as three to one (three of the carbohydrates to one of protein) and cease to ingest sugar, acids, alcohol, oils and condiments and, especially, fruit acids.

We also have an accompanying acidemia. The blood should be approximately $\frac{1}{4}$ per-

cent alkaline. Change this alkalinity to acid, and what happens? Here, we not only have acetic and butyric acids absorbed from the alimentary canal and set free in the blood stream, but also carbonic acid (CO_2) as a waste product constantly entering the blood, resultant from katabolic processes of the cells.

We know what happens to a syphilitic or malarial subject when the blood and other cells become irritated by bacteria. The central nervous system becomes affected and mental vagaries are the outcome. Nervousness then becomes doubly sure as reflex from irritation of the cerebrospinal and vasomotor systems, the joint result of hyperacidity and acidemia. In the one instance, the bacteria feed on the hemoglobin and oxyhemoglobin, affecting and irritating the central nervous system, often causing amnesia or dementia, as is also noticeable in the later stages of pellagra which become, if not properly treated, as malignant as either syphilis or malaria.

Pellagra has been called a deficiency disease, and with just reason when the reproach of deficiency is directed at the high milling process which robs the cereals of their protein and vitamines, leaving for food material but plain starch to be ingested.

None of the whole grains contain sufficient protein after being subjected to the high milling process. In nature, corn contains one part of protein to ten parts of fat; wheat, one to eight; oats, one to six. Their by-products should be readded to fill the demand for a balanced human food. Bran, a by-product of wheat, contains one part of protein to four parts of starch. Glutens meal, a by-product of corn in the manufacture of starch, contains one part of protein to two of starch. Beans and peas are rich in protein. The soya bean contains one of protein to two of starch.

Protein in Whole Wheat, Rice and Corn

Nature has provided the cereals with a combination of food products (carbohydrate and protein) in their natural state sufficiently well proportioned to render life and health (with air and water) to the animal ingesting them.

We are not satisfied with nature's production of whole wheat flour. This product looked coarse and dark when served and, so, the "high-milling process", by removing the pericarp, or bran, served to smoothen and whiten all wheat products

of the bakery and oven. This at once thoughtlessly and ignorantly removed a very necessary constituent—protein—from our wheat-flour food. We are paying dearly for our fastidiousness and the sooner we come to our senses as a nation and, like the prodigal, return to first principles of nature, the less pellagra will prevail throughout the nation.

The same condition prevails with polished rice. The proteins and vitamines have been removed with the pericarp; and almost or quite pure starch remains. Maize (corn), too, has fallen within the same category and is not only devoid of much of the vitamines and protein, by "mill" refining, but more readily becomes over-heated and musty when converted into Indian meal.

These three illustrations, of wheat, rice and corn, explain why a pellagrin develops pyrosis plus other phenomena of the gastrointestinal tract, and they account in great measure for the hypernervousness and the accompanying somatic symptoms; for, we are well aware that an exclusive or excessive diet of rice flour will produce a multiple neuritis and even paralysis in both, fowl and man,—even beriberi.

Whole wheat, corn and rice are very nutritious and healthful foods in their fresh and natural state. It is when man has denatured these products, depriving them of their vitamines, or when they are allowed to degenerate by becoming overheated, musty or sour from fermentation and then ingested as food, that pellagra affects the human subject. Pellagra may also be produced by the ingestion of too much protein food (wet variety) in an exclusive diet of meat, eggs, fish, which "wet variety" is perhaps the dry variety plus animal-protein poisoning, or eczema, or both.

What Conditions Produced Pellagra

The war period with its food problem is responsible for many pellagrins found all over the world but especially in the United States. The high prices of nitrogenous foods, the garden products overbalancing the price of eggs and meats determined the frequency of pellagra. The substitute flours from which warbread, pastries, pie-crusts, puddings and cakes were produced were in many instances overheated and musty, proving unfit even for cattle consumption. The greatest harm is yet to be revealed. A pellagrin does not become a pellagrin in a day or week or month. The

future will outnumber any previous record; the seeds of which are already sown; "Why cross a bridge until it be reached" is the slogan of every American. But, if it be possible to avoid the crossing, what then? Is it not worthy of consideration? The medical profession owes a very serious obligation to humanity, which it may pay in great measure by diagnosing and treating pellagra; if not in its incipency, then at the latest in its early chronicity.

Why be content in the mere knowledge of diagnosing and curing disease? Preventive medicine is a greater achievement and altruistic beyond compare.

A manifest and active interest into the daily regimen of the community and especially of our patients might not only prevent pellagra but be productive in fortifying the system against many and various diseases.

Climate and Temperature

Climate and temperature practically exert their influence on the objective and subjective symptoms of a pellagrin. This may be accounted for as viewed from an agricultural and dietary standpoint. With the advent of spring and summer, we partake of more vegetables and less meats. This factor, together with that of salads and tomatoes, with a demand for vinegar, sugar and oils, with additional acid-fruit juices, is responsible for the unmistakable gastrointestinal symptoms of pellagra.

The pellagrin will remain comfortably healthy during the winter months, but, on the first appearance of spring, of early vegetables, salads, and fruits, he will again develop into a miserable pellagrin, who finds little or no relief, unless properly treated, until winter again approaches.

Even during the winter months, many pellagrins suffer recurrent attacks of the disease, by the ingestion of too much vinegar, hard cider, fats and breakfast foods containing too much starchy substance whose end product is acid. Oranges, grape fruit, grapes, cantaloupes, apples and lemons should be denied a pellagrin. Meats, soups, potatoes and gravies should constitute the diet of a pellagrin; with coffee, tea, chocolate or milk, with a very moderate amount of sugar. Alcohol is strictly prohibited unless the patient is diabetic.

Dietotherapy

If we remove the cause, we invariably relieve the effect. If a certain regimen

produces a chain of symptoms within the alimentary canal, causing interference with the normal functioning of a viscera or of several viscera, a reasonable therapy is at once suggested, in that a changed or altered dietary based on scientific visualizing, will prove a reasonable and logical course of procedure.

Hyperacidity and Acidemia

In the treatment and cure of a pellagrin, we find as pathognomonic symptoms both hyperacidity and acidemia, an acid condition of both, the alimentary canal and the blood. When these abnormal conditions are eliminated and the natural equilibrium is restored by natural functioning, we no longer have a pellagrin.

Dietotherapy

For the hyperacidity, we must look well to the intake of food to be ingested. Eliminate all fruit acids, eat sparingly of carbohydrate foods, especially sugar, alcohol and vinegars. Beans, peas, potatoes and carrots, carry both carbohydrate and vegetable protein and are allowable with meat, fish and eggs (animal protein) in moderation. The most effective and curative therapy applicable for pellagrins is dietotherapy. Drugs are of benefit for the most part adjunctively only. For the dysfunction of the hormone group of the endocrine system, also of other viscera, glandular extracts and enzymes will become invaluable remedies.

For the acidosis, we must change the acetic, butyric and carbonic acid radicles by administering an excessive amount of the protein element (nitrogen) plus hydrogen and oxygen. We must introduce an element into the blood which will prove an affinity for the excessive amount of carbon which has already found its valency in the production of various combinations. We must also introduce alkalis to favor cleavage and neutralization of the acid organic combinations, and restore to the blood its normal alkalinity. To this end, we administer sodium chloride, sodium phosphate, magnesium sulphate to restore alkalinity of the epigastric region and dissipate the di-acetic and butyric acids, thereby lessening or eradicating entirely the formation of acetone in the blood. For the protein element plus hydrogen and oxygen or reagent, we administer the inorganic nitric acid dilute; from 15 to 30 drops in large glass of cold water, on an empty stomach, before

meals. We thus form in the gastric region a dilute nitromuriatic acid, which is also an inorganic combination containing chlorine, protein and sodium, a very desirable and effective combination.

Coexisting Diseases

Pellagra will appear in the human subject irrespective of any other disease or diseases and pays no respect whatever to the supposed law of "pathological antagonism". Thus we often find a pellagrin suffering with two or more diseases, presenting symptoms of each pathological condition.

It goes without saying that a pellagrin must be treated on general principles for other pathological conditions. Many pellagrins, especially the aged, have other bodily, visceral, organic or constitutional complicating maladies. These should be treated simultaneously with the pellagra.

Strychnine is always indicated in general debility and enervated musculature, especially of the heart. If the patient is malarial, give quinine. If lues is present, either hereditary or acquired, give specific mixed treatment. If there is eczema, add arsenic and iron to the luetic specific. If diabetes, ascertain the cause and remove it. Diabetes mellitus is but a symptom. If there is an accompanying hypothyroidism, the desiccated thyroid substance will remove the myxedema. If hyperthyroidism prevails, prescribe quinine-hydrobromide, in 5 to 10 grain doses, 3 times daily. This will often cure exophthalmic goiter if associated with appropriate local and other adjunctive treatment.

Amino Acids

It becomes quite necessary in the treatment of pellagra to equalize within reasonable approximation the intake of carbohydrate and protein foods in proportion to systemic requirements of anabolic and catabolic equilibrium to insure metabolic sufficiency.

If we oversupply by suralimentation of protein, we are furnishing a chemical supply of this element of nutrition, which may combine with the carbohydrate radicle

(CHO) and its organic compound by displacement of hydrogen by the amino radicle (NH_2), and thus produce within the body one or more of the amino acids, eighteen of which have already been discovered in the protein molecule. This corollary should warn us against the production of acids within the alimentary canal

and blood which become the predisposing cause of hyperacidity and acidemia in the pathological condition diagnosed as pellagra.

Calories

Adequate nutrition is necessary for a healthful life. In order to supply this nutrition to any animal to life-giving effect, we must give both carbohydrate and protein foods. Here then lies the secret of health. We need approximately three thousand calories, or heat units, daily to keep us in a normal, healthy condition. We depend solely on the carbohydrates to furnish this heat. Carbohydrate food is the heat producer of the body and is consumed entirely through the respiration. Protein (nitrogen) is a tissue-building element which the cells convert into proteid (with the aid of the carbohydrates), proceeding to make up for the waste of the body tissues during our waking and sleeping hours. It is when we are asleep, only, that the cells really and truly work upon the up-building of weak and diseased tissue. While we are actively engaged mentally and physically, the cells find constant employment in resupplying tissue waste. We should therefore provide our bodies, while sleeping, with the elements of nutrition so that the cells may have material with which to build. To this end, I advise my patients to partake of a light, nutritious lunch before retiring. If they are too sick to partake of culinary foods, I supply the needed "elements" through remedies containing carbon, hydrogen, oxygen and nitrogen, a tissue building formula.

From all this, it is readily seen that sleep and rest plus properly apportioned food elements (carbohydrates and protein) are absolutely essential for normal health; the prerequisites for a sound mind in a sound body. It also becomes evident that, if my argument be axiomatic, then dietotherapy as applied to diseases, and especially to pellagra, is a very great and urgent necessity of therapeutic value.

Protein Toxemia

It is possible and even probable that the moist, or wet, variety of pellagra is caused by mixed infection. We observe, in animal-protein poisoning, the same skin lesions as are apparent in the wet variety, minus the pigmentation and the peculiar pellagrin mask. The papulovesicular condition of the cuticle is analogous and is sometimes asso-

ciated with eczema. The acidosis may also become apparent by the formation of amino acids, produced from the protein molecule, which perhaps would not of themselves ever produce pigmentation of the skin, but which, in connection with acetone derived from the diacetic and butyric acids, from excessive ingestion of the carbohydrates and hydrocarbons, may account for the deeper and darker discoloration of the cuticle of a pellagrin that is always noticeable in a wet variety subject.

Patient: Mr. R. Commercial Agent. Had a good appetite, good digestion and ate largely of meats. He remained healthy, weighing over two hundred pounds and enjoyed life until—This is the story: He had a most charming and agreeable wife who had subjected herself to an operation—thyroidectomy. She afterwards continued along with the husband in their former carnivorous way and, consequently, developed animal-protein poisoning and myxedema. I was consulted and advised the lady to become a vegetarian, which she did. With the aid of thyroid extract in addition, she became quite well. About one year later, in the spring of 1918 the husband consulted me and I diagnosed his ailment as pellagra of the wet variety. This is the husband's story. "Wife and I had been used to eating largely of flesh food. Since she became a vegetarian, I have gone along with her and have myself become a vegetarian while at home. I am living largely on breakfast foods and vegetables, eating large quantities of shredded wheat and corn flakes. But, rest assured, I indulge my appetite in a carnivorous way while on the road and, now, look at me. These hands are a sight of which I am ashamed and these little lumps (vesicles) itch when I am overheated. Why, I'd as leave be dead. Can't you do something for me? My stomach is sour and I have indigestion and I feel very miserable."

I told him that there was hope for him if he would go along with me; that medicines alone would not cure him; that he must pay strict attention to his regimen; that he could not be cured in a week or a month; that, even after the winter months when he felt comparatively well, there was still danger of a recurrence in the spring, summer and fall for a year or two to come.

This man is still under observation but has been feeling quite comfortable since

the fall of 1918. The pigmentation gradually disappeared and his gastrointestinal troubles are a thing of the past. His treatment was along the lines described in this paper.

I, therefore, believe and assert that pel-

lagra is due absolutely and undoubtedly to wrong dietetic habits and that it cannot be cured except by the applied principles of dietherapy, plus the adjuvant therapeutics of physiochemistry. Pellagra is positively not contagious.

Municipal Hospitals in Western Canada

By MRS. HAROLD BAYLY, Chicago, Illinois

MUNICIPAL hospitals are an established fact in Western Canada.

Fifty years ago, in older countries, nursing was exclusively a charity of the Church on the one hand and of a benevolent aristocracy on the other. Today, the viewpoint has changed. Public health has come to be regarded as a public responsibility.

Alberta stands well in the van of progress. Much of the credit for this is due to the women's organizations. They have striven faithfully for the establishment of hospitals in rural districts. No achievement of Canadian women has been of more vital benefit to the farmers of the nation. For a dollar a day, the farmer now may have medical attention and trained nursing in a properly equipped modern building.

Eight municipal hospitals, with 192 beds available for patients, are in operation at Manyville, Vermilion, Drumheller, Cardston, Islay, Bassano, Onoway and Lloydminster. Two more are being built, at Hanna and Viking. Seven other districts are organized, and construction work will start without delay at Provost, High River, Pincher Creek, Empress, Calgary, Ashmont and Grande Prairie. Apart from these, there are 49 hospitals in the province in receipt of government grants. Municipal hospitals are a branch of the Department of Public Health.

The first Municipal Hospitals Act was passed in 1917. Before being placed on the Statutes, it had been referred to such organizations as the Women's Institute Branch of the provincial department of Agriculture, the United Farm Women of Alberta; and the Free Hospitals' League. The hope was, that the Act would be of real benefit in the rural districts in providing medical attention for farmers and their families, without undue expense and

the necessity of making long journeys to secure it.

The Act Governing the Hospitals

The Act passed in 1917 was not found practicable. In 1918 and again in 1919, it was amended. Its subsequent success is proved by the steady and constant growth in the number of hospitals established throughout the province.

Before sanctioning a new hospital, the Provincial Treasurer requires to be assured that the institution will be self-supporting. Otherwise, it would be a hindrance, on account of the taxation, rather than an attraction to newcomers. It must also conform to the standard set by the Department of Public Health. This calls for the erection of a fully-equipped hospital of not less than ten beds.

Any twenty-five taxpayers living in a municipal or an improvement district may petition to be formed into a hospital district. But, as the nine townships comprising a municipality could not of themselves support a hospital, the next step is, to find out over how wide an area the interest extends. When the Minister has satisfied himself as to this, and that there is enough financial backing to support the scheme, the appointment of a hospital board follows.

Their first duty is, to prepare a plan. The chief problem as a rule is, the selection of a site. They may do one of three things. They may put up a new building, rent an already established building, or enter into an agreement with the Board of an existing hospital to obtain hospital services from that source. No scheme is finally ratified unless it is carried by a two-thirds' majority of the people interested. It is the people who bring the hospital into being and who maintain it.

For the purposes of finance, the hospital

board may borrow an amount equal to the capital expenditure involved, and may issue debentures carrying interest at the rate of not more than 8%. As showing the attention these are receiving, the first Municipal Hospital Bond put on the market was sold at a better price than was being paid at the time for school debentures. This was very encouraging.

Three Types of Municipal Hospitals

There are three types of municipal hospitals in Alberta. It has not been the policy of the administrators of the Municipal Hospitals Act to provide these varieties. They have developed naturally to meet community needs, and the government has endeavored to cooperate with the Boards so as to meet the particular conditions in different districts.

The first type is what one would expect to find in any well-settled community where there is a resident doctor and no special call for outside or district nursing. Manville, the first Municipal Hospital in the Province to be opened, also Vermilion, Cardston and Basano are specimens of this type.

Then, there is the type that serves the people in a district where there is no doctor. Of such a type is Onoway. The building, delightfully situated on a hillside, had accommodations, originally, for five patients. Established in 1913 by an English Church Missionary Society, it was, in 1919, turned over to the district by Archbishop Gray, of Edmonton, to be operated as a municipal hospital. At that time, the building and equipment and ten acres of land were valued at \$12,000. The Board immediately renovated the building, supplied it with modern equipment and installed an electric lighting plant. Recently, they added an extension to be used as a nurses' home. In this manner, the original building has been converted into a ten-bed institution.

In that hospital alone, since the beginning of 1920, thirty-three new babies have seen daylight, and 374 patients have been successfully treated.

Nor does this complete the story of its activities. In the four farthest corners of

the district, are four first-aid stations. The supervision of these is undertaken by the hospital staff. Outside visits are made by the nurses and, in one month, twenty-eight such visits involved drives varying from ten to forty miles. A team of horses for this purpose is kept at the hospital.

The third type of hospital was opened at Drumheller, in July last. This is not only of general service to its town and urban taxpayers, but is equipped with every convenience including an X-ray apparatus for the satisfactory handling of the accidents that are apt to happen in a mining community. It is the finest municipal hospital in the province.

Hospital Finances

What of the cost of this hospital service to the man and the woman on the farm? In the districts where hospitals have been established, the tax works out at \$4.80 per quarter section per year. This is not a heavy price to pay for efficient hospital services for a man, his wife and his family. It is, in fact, a moderate premium on a policy which insures hospital accommodation, when one is sick, at the rate of \$1 a day.

If one is not a taxpayer, as for instance in the case of a school teacher boarding in the neighborhood, an Anglican minister who does not own property, or a young bachelor working in a store or an office, it is possible to reap the same benefits upon the payment to the hospital of a certain sum, usually amounting to \$5, in lieu of taxation.

From a financial standpoint, there are no "private" wards in the municipal hospitals in Alberta. This does not mean that there is no privacy for patients who from the nature of their illness require it. These are allotted separate rooms until their convalescent periods.

It is estimated that 75 percent of the cases handled are women and children. The maternity rooms are perhaps more used than any others. In the 392 maternity cases already treated, there has so far been no death either of mother or child. This is a record of which the municipal hospitals are rightly proud.

Niagara Falls and the General Typhoid Fever Rate

By A. L. BENEDICT, A. M., M. D., F. A. C. P., Buffalo, New York

WITHIN a comparatively few years, especially in cities with a guarded water supply, the importance of infection from extra-mural sources of water, on vacations and short trips from town, has become well recognized. Some local health boards claim that 50 percent of the typhoid in their respective cities is imported. I fully realize how recent this conception is from the very unfavorable reception of my opinion at a meeting, some years ago, that autumnal typhoid fever was largely vacational typhoid and that polluted water, especially well-water, was an important factor in the incidence of the disease in spite of the small quantities and brief periods during which such water could operate.

Taking into consideration the large number of visitors, their very wide distribution and the former high degree of pollution of the Niagara Falls water, it may be claimed that, for the country at large, Niagara Falls was a very important fomes of infection, much more so than was realized, and that the present excellence of the water is, conversely, an equally important and equally generalized positive factor in the reduction of typhoid.

It may be observed that these facts applied also during the period when typhoid fever was extremely prevalent, subject to the qualification that any city which almost constantly supplied its inhabitants with polluted water would notice no increase from the occasional use of a foreign supply; not to mention the obvious doubt as to whether, with an adequate local source of infection, more than an inappreciable increment of risk could be ascribed to infection from without.

Without ignoring the various other media of infection, which are well known, it may be said that, after the first hysterical tendency to magnify the newest into the main cause of the disease, the general evidence has been, to recur to the water supply as the most important by far and the essential ultimate cause even when some other medium may be immediately responsible; such as,

ice, milk, vegetables; which may be mentioned more especially.

Typhoid Fever At Niagara Falls.

From 1900 to 1912, the Niagara Falls mortality rate from typhoid fever averaged 122.7 per 100,000 population, never being as low as 80 and twice reaching above 180. It fell to 9.6 after the installation of filters and has scarcely averaged 5 for the last 5 years (1 or 2 deaths a year). Unlike many cities whose initial public water supply was fairly good, through a fortunate relation of water shed and streams to population, Niagara Falls passed from the pump and privy stage to that of sewerage and water supply, with the last not much if any better than that of the average village well. A glance at the map will explain this, remembering that the sewers of Buffalo discharge into Niagara River scarcely 20 miles up-stream, that the current is swift (10 miles at first and scarcely less than 3 miles per hour at any intermediate point), that considerable though less volumes of sewage reach the River at less distances above the Niagara Falls intake, and that the River is nearly straight, with only gently curved banks, having virtually a rock bottom throughout, so that opportunities for sedimentation, catching of solids by bays and oxidation, etc., are slight.

The potential and, up to 1912, almost actual contamination of the Niagara Falls water supply may be expressed in figures, approximately, as follows: Flow through the east channel of Niagara River, 50 billion gallons per day; population discharging sewage into this channel within 6 or 7 hours by current, say 300,000 increasing to 600,000 in the 30-year period before the installation of filters; concentrated sewage, 1/3 gallon per capita per day (1.261 lit.); excrementitious matter of human origin increasing from 1 part in 500,000 to 1 part in 250,000. Whether allowance should be made for the animal population, especially in the large stock yards of Buffalo, for more distant contamination of Lake Erie and the creeks entering Niagara River, for the exceptionally large and probably exaggerated total

pumpage of water for Buffalo (100 to 400 million gallons a day, at present estimated conservatively at 200 to 300) need not be considered here. To be fair, the increase in excrementitious matter has probably been more than balanced by the decrease of typhoid in Buffalo. However, it is impossible to estimate the effect of carriers and, more generally, the degree to which the sewage from a community with a low but appreciable typhoid incidence may be considered "safe" for down-stream water supplies.

The Tourist Factor.

Under the average conditions of visitors to Niagara Falls—warm weather, unusual physical exercise in sight seeing, recourse to low-grade though not especially low-priced restaurants—considerable water would be drunk and the resistance against typhoid would be relatively low. Each liter of water would contain, potentially, 2 to 4 mg. of excrementitious matter from a population with a moderate typhoid incidence. It is impossible to estimate what this means numerically, in terms of typhoid bacilli, but it is pertinent to the problem to call attention to the fact that typhoid may be implanted from a very small number of bacilli, possibly from a single one, that there is no life-cycle phenomenon to be considered as influencing infectivity but that the bacillus or, at most, a few bacilli, are competent to infect so long as they are alive.

Under these circumstances, the typhoid incidence at Niagara Falls, up to 1912, is the only practical quantitative expression of the risk of infection that occurs to me. As indicated, the mortality rate averaged 122.7 per 100,000 population from 1900 to 1912. The ratio of deaths to cases is much less freely stated by modern writers than formerly but a fair average may be deduced from such as express an opinion, as 1:10. With due allowance for the failure to report non-fatal and, especially, mild cases, this ratio agrees quite well with the incidence of and mortality from typhoid compiled by health boards. That is to say, 12.27 per mile annually contracted typhoid in the Niagara Falls population, the maxima and minima being about 8 and 19 per mile. Bearing in mind that the sudden increases in population due to extension of boundaries and industrial development antedated this period, so that we are dealing with a population immunized to the highest degree conceivable by previous at-

tacks, this incidence is obviously a low index of actual risk. Indeed, it corresponds to just about 50 percent of the average yearly growth by excess of births over deaths and immigration, in both of which increments some immunity must be allowed. Conversely, the present very favorable mortality of only 5 or less per 100,000, may be similarly affected as an actual index of risk.

Distant Effects.

Discussions of this sort cannot be reduced to figures except to a very approximate degree. Conclusions are apt to err in either direction. For instance, if half of the increment to the population of Niagara Falls contracted typhoid in a year, it is not to be expected that half of a more or less immune, mainly healthy adult visiting population would be similarly involved from the same exposure. On the other hand, the risk for a day would be considerably greater than 1/365 of the risk for a year—on somewhat the same principle that one cannot spoil bad eggs. The visiting population has been estimated for many years at a million a year, including repeats from near-by points and is now estimated at a million and a half, the extra half million probably corresponding to transient automobile drivers most of whom do not stay long enough to drink water. This visiting population comes from widely and fairly evenly distributed points. At any rate, if it has not directly conveyed typhoid infection to all parts of the country, it has carried foci of infection to numerous subordinate centers from which distribution has occurred by drainage and by travel, and intranational migration, mainly by "carriers". The greater the pre-existing incidence of typhoid in any one place, the greater the immunity in visitors from that place and the less the effect even of bacilli adventitiously carried back, on the already polluted locality. The converse also holds good, so that the effect of Niagara Falls in the past has been, to offset inequalities in incidence due to physical geography, sanitation and good luck. Thus, the sanitary achievement of a potable water supply for Niagara Falls has a far-reaching and not merely a local benefit.

From one standpoint, Niagara Falls may be said to be merely a type, an illustration of what has been or what may be accomplished from the safeguarding of the water of any resort. But, for the reasons stated,

the type and the illustration are so prominent, that the before and after of this particular Mecca of tourists are to be taken in

a literal and direct sense, just as the original Mecca has had a special bearing on the spread of cholera.

Ex Commentario Medici

By H. C. D.

EDITORIAL COMMENT.—One of our very good friends recently submitted a series of thumb nail sketches based upon personal experiences in his practice. These are so attractively written and so true to life that we at once requested permission to print them serially in CLINICAL MEDICINE. The articles will be continued as long as the supply lasts.

*"This is the way that physicians end or mend us
Secundum artem; and, although we sneer
In health—when ill, we call them to attend us
Without the least propensity to jeer."*

—Byron.

Dave Judson

FOR over three years, Dave has been a daily reminder to me of one of my obstetrical tragedies which I have been unable to explain to his complete satisfaction. How could one explain, without an autopsy, the almost instantaneous death of a healthy woman five minutes after a normal delivery? Especially when it was her third easy labor! And, more especially, to a choleric husband with a little information but with very little intelligence? Dave was passing around cigars this morning, not recklessly but quietly, to a few of his friends; so, I suppose his present wife has done better than did poor Stella and presented him with a son. Well, I trust that young doctor whom Dave praises so highly found the case no more than moderately difficult, and that he has to wait not too long for his fee.

—
Aunt Mary Brinton

One year ago, Friday, Uncle Ben Brinton had his stroke. After lingering a few days, during which time the whole town walked and talked with hushed solemnity, he died, and we all shared in the cruel blow that had fallen on Aunt Mary. The big white house on the hill, in which they were married and lived for over forty years, was closed, the shades drawn, and Aunt Mary, along with the ducks and the chickens, was carted off to live with her

daughter Fannie. The heirs could not agree upon a satisfactory division of the estate; so, the old house remained empty except for the furnishings which Aunt Mary would allow no one to so much as touch. Fannie drove over sometimes on Sunday, leaving her mother fussing about the house for an hour or so while she herself visited with the Hattons across the road.

Yesterday, Aunt Mary asked to be brought to town and, along in the afternoon, came into the office. After a few words of greeting with the assurance that she was feeling as well as usual, she gave me a fine old Paisley shawl, inherited from her mother and greatly admired by my wife. Shortly after she left, Fannie rang up from the Emporium to inquire if her mother was still there, as she was ready to go home. About an hour after this, a call came from the Hattons to come at once to the old Brinton house. They had seen Aunt Mary enter some time before and thought it strange she should be alone. Mrs. Hatton went over and found her unconscious. I arrived in time to see her breathe her last, lying peacefully on the great old four-poster upon which Uncle Ben had died, at the same hour, just a year before.

—
Judge Williams

When the Judge of our Circuit Court rang up requesting me to come over after dinner, the tone of his voice fairly made me gasp. Something of its brisk hearty quality that I knew so well was wanting; which somehow gave me a most uncanny feeling of depression. I had seen Mrs. Williams and Ethel about noon and had noticed nothing unusual about either of

them, unless it was that Ethel had developed into a very charming young lady. The Judge had been one of my best friends since the birth of his only child, some seventeen years before. He was a man of unquestioned character and ability, loved and respected by all who knew him, always in the best of health. I could recall no act of mine to account for this almost curt summons to his house. A hundred useless conjectures occupied my mind until I narrowly missed dropping some iodine into an eye for which boric acid was intended.

Upon arrival, I gave the old-fashioned bell a twist and entered as usual without waiting. Sing Lee met me in the hall and conducted me to the library where I found the Judge all crumpled up in his great arm chair. The room was dark but for the light from a smouldering log in the fireplace which, bursting into little flashes, deepened the lines in his rugged face and proclaimed the fact that he was aged by years since yesterday. With an effort, he pulled himself together, then, looking me in the eyes steadily for a moment, as though sounding the very depth of my soul, he gave his reason for calling me. Astonishment and incredulity gave way in turn to wrathful indignation as he proceeded with the wretched story.

Mrs. Morris had received a letter that day with an account of Will's marriage at Camp Mills before his regiment started overseas. He and Ethel had been devoted friends since childhood, they were together much of the time during his recent leave, their betrothal was to be announced on his return from the war. Of course, she was immensely proud of him, as we all were, and loved him with the warmth and confidence of indiscreet youth. Stopping at the Morris home that afternoon, she there had heard the dreadful news, then dragged herself to her room where he found her later, dry eyed, trembling, stupefied with shame and terror. Finally, in a wild burst of tears she flung her arms around his neck and told him everything. We supposed her mother must be told. Certainly. But, it would be difficult. We both knew Mrs. Williams.

What thoughts were passing through the Judge's mind as we sat in silence? The blow had fallen without the slightest warning, leaving him stunned in mind and body, incapable of any emotion but compassion for his daughter. But, to me, the thought

of accepting this monstrous outrage with resignation was intolerable. Many expedients flashed into my mind, to be discarded as impracticable or as certain to make the matter worse. His only request was, that I see Ethel and quiet her nerves, and my only suggestion was, that he give me a few days time consideration of the case. As the subject was never again brought up between us, I have no reason to suspect that the Judge ever mentioned it to anyone. Some days later, I started for a convention in St. Louis and, in a day or so, Ethel left for a visit with an Aunt near Chicago. She returned in a few weeks, perhaps a little pale and preoccupied, but resolute. Mrs. Williams continues active in the Ladies League, a pillar of strength to the righteous. The Judge looks at me wistfully sometimes. Old Aunt Jane Evans told me, the other day, that Ethel Williams jilted Will Morris and then cried her eyes out when he married that New York girl. I learned nothing of value at the convention but have no regrets for the time and money spent.

James Manning

About twenty years ago, on a certain spring morning, a stranger appeared at the home of old Cyrus Tanner, intimating in soft southern accents that he was hungry and wanted work. After breakfast, Cyrus doubted whether the slim, good looking young man with the slender white hands and the lustrous dark eyes could ever earn enough to pay for his keep, but the intervention of Aunt Sarah persuaded him to give the youngster a chance. However that may be, it was under such circumstances that James Manning first came to Brighton. Local history has it that he worked for Tanner two years, and then rented a farm for himself which he soon owned and thus laid the foundation for a fortune that finally ran well into six figures. Apparently, but little effort was ever made to look into his antecedents. It was understood that, following a family quarrel, Manning had left home in anger and was proving his ability to shift for himself. Obviously of good stock, his industrious habits, frankness and high sense of honor disarmed suspicion; so, none but the most audacious ventured into personal inquiries. As he was able to satisfy their curiosity without enlarging their stock of information, he was accepted at his face value and

became one of the leading citizens of the county.

I knew him well, as farmer, stockman and merchant; a slight-built, modest and kindly man with thick white hair and youthful features contrasting strongly with the deep brown eyes which at times seemed to hold the wisdom and the sorrows of ages. Shrewd but never sly, genial but never jovial, generous without ostentation, he commanded the respect and confidence of all who knew him.

For several years, Mrs. Manning and the children had spent a part of each winter in Florida. Although she and I often conspired against her husband, we were never able to refute the plausible arguments he would advance for remaining at home. His distaste for traveling was positive and beyond our influence. Last February, however, he received a telegram from his wife telling of Ruth's serious illness in Tampa, urging his hurried preparation for departure. Naturally somewhat grave, the circumstances might have accounted for a certain grimness with which he set about it. The thoroughness with which his well ordered life was regulated would, perhaps, cause him to regulate emergencies. Or, to an inexperienced traveler, it may have seemed a dangerous undertaking. At any

rate, he informed me that, if anything happened to him, we would find full instructions in his box at the bank. Fortunately, Ruth's condition was not as serious as at first thought, so, Manning returned in about a week but so changed I could scarcely recognize him. Disheveled, haggard, sullen, with cruel lines about his mouth and a somber gleam in his eyes that promised trouble. The next day, he came into the office and asked if there was any way of removing old scars? I gave him little encouragement except to say they could be made less conspicuous. He did not appear to be greatly concerned and I was not particularly interested. That night, Manning was found in bed, unconscious; and he never rallied. It seemed to be a case of narcotic poisoning but, there was no known motive and nothing of the kind could be found in the house. The report that he had suffered a cerebral hemorrhage was not denied, as there was no positive evidence to the contrary. Upon examining the body, the next morning, I found fourteen long scars extending across the back and shoulders, faint with age but now well marked in contrast with the congested skin. And across the sacrum, evidently burned in, was the letter G, and the figures 2203.

(To be continued.)

A SEASON for simple living with the kindly sun and the blue sky; days of keen delight in little things, of joyous questing after beauty; for the making of friends by being a true friend to others; days when we may enlarge our little lives by excursions to strange places, by friendly association, by the companionship of great thoughts; days that may teach us to live nobly, to work joyously, to play harder, to do all our labor better,—so should each June bring us indeed a golden summer.

—Edwin Osgood Grover.

What Others are Doing

RECURRENT MUMPS

While most authors assert that, in common with many other bacterial maladies, one attack of parotitis is followed by an immunity sufficient to prevent recurrence, French authors have expressed the opinion that repeated attacks of this disease in the same individual are fairly frequent. Special reports of such observations are not at all numerous, though.

In the *Wiener Medizinische Wochenschrift* for April 2 (1921 No. 14, Col. 637) Dr. Josef K. Friedjung, of Vienna, reports the case of a girl six and one-half years old, the only child of healthy parents, who, on January 5, 1920, acquired parotitis during an epidemic in the school which she attended. The symptoms were, pain in the region of the left ear, with fever. The next day, swelling of the left parotis, and, two days later, swelling of the right parotis. The affection ran a simple course, with temperature rise (axilla) to 101.5° F.

On May 31, 1920, pain at the left ear, temperature 101° F. (axilla); acute sensitive swelling of the left parotis. The symptoms subsided within one week. On September 17, 1920, the same symptoms made their appearance; axillary temperature 99.4° F. The swelling is doughy, soft, slightly edematous, sensitive to pressure (left parotis). Some difficulty in opening the mouth.

September 18, temperature 99.5° F. September 20, the fever had disappeared. There was no pain; swelling was diminished; edema absent. The parotis was moderately tense and could be palpated. September 26 normal.

"I was ready to publish this unusual case report," says Friedjung, "when I was called again to see the child, on October 5, 1920, the same symptoms having made their appearance once more. Temperature 100° F. (axilla). The clinical findings were like those of September 17. The next day, the child was improved, with a temperature of 99°. One day later, the temperature was

normal, swelling had diminished, but the gland felt more firm than at first. October 11, all symptoms had disappeared."

Until the close of the year, no further symptoms have been observed.

There were thus four attacks of parotitis within a period of little more than nine months; occurring at gradually diminishing intervals. The second attack followed five months after the first; the third appeared three and one-half months after the second; and only nineteen days intervened between the third and fourth attacks. During the first attack, which began on the left side, the right parotis was involved as well. The three subsequent seizures affected only the left gland. While on the first occasion the affection was clearly epidemic, this is not true for the three subsequent recurrences which, moreover, were not followed by contact infections of other children. However, clinically, the trouble must be designated as acute epidemic parotitis.

It is possible to explain the first three attacks as due to independent exogenous infection. However, the fourth, with an interval of only nineteen days, followed actually after the ordinary period of incubation, and it seems as though the patient infected herself. The conclusion is, therefore, that, in this case, a complete immunity was not established.

OPERATIONS UNDER PROCAINE

What a surgeon can do under local anesthesia, who really has studied it and become more or less adept, is truly surprising.

Franklin (*Jour. Med. Assn. of Georgia*, Dec. 1920) does major operations by infiltration of the parts with procaine solutions, such as, reducing strangulated hernia and incarcerated umbilical hernia; he even does appendectomies. In the publication named, he describes an operation on a woman weighing 250 pounds, involving both reduction of a bad umbilical hernia and removal of the appendix.

Morphine, gr. ¼ and atropine, 1/50, were

given hypodermically prior to the patient going on the table. An elliptical transverse area was blocked off by infiltrating first the skin fascia, then the rectus muscles through to their posterior sheaths. A 0.5 percent procaine solution, with 4 drops of adrenal in to the ounce, was used. The area blocked off was about 10x6 inches. The patient remained upon the table for three hours but bore up very well and without complaint.

Franklin observes that a 0.5 percent solution is most efficient and that as much as 200 to 250 mils (Cc.) may be used without mishap.

A NEW VACCINATION SITE

Instead of the outer surface, Goldberger (*Med. Record*, Dec. 25, 1920) proposes that we use the inner and posterior surface of the arm when vaccinating against smallpox. He has done so for years, has vaccinated over 500 children, and in no instance did enlarged glands develop in the axillæ. As ordinarily done, secondary infection and pain are apt to follow, thinks he, for the reason that the operation is performed on a surface constantly exposed to friction and over fibre muscles, the frequent contractions of which tend to cause irritation and deep induration, involving skin, fascia and certain muscle groups.

But, the chief reason for choosing the inner back surface of the arm is, that it leaves no visible scar. Usually, the scar resulting is small and superficial. Then, too, the danger from infection is less; trauma is less often experienced; nor are there extensive indurations or sloughings to deal with, according to the author.

ORGANOTHERAPEUTIC TREATMENT OF MALARIA

An unsigned communication to the *Indian Medical Record* (Dec. 1920) points out that no phase of the study of malaria is of such importance as the relationship to the infection of the glands of internal secretion. As these glands are the chief factors in the defensive mechanism of the organism, this can be readily appreciated and all the more so because, in the words of Sir Patrick Manson, "We don't cure protozoal infections with drugs. We keep them in check until the resisting power of the patient can overcome them." That has been the role

played by quinine during the many years it has been used in the treatment of malaria.

It has been found that suprarenal insufficiency accounts for the asthenia, cachexia and anemia so often met with in malaria, while it also is responsible for the digestive disturbances frequent in the chronic form of the affection. It is, therefore, with justice that epinephrin has been advocated as meriting a place close to quinine in the treatment of severe forms of malaria.

As the spleen is one of the organs affected in malaria, spleen therapy has been advocated especially where there is definite evidence of enlargement of the organ. This form of therapy has proved its usefulness. One author has gone so far as to say that it produces the good effects of quinine without its bad effects. Nouveau claims that it is superior to quinine, arsenic or iron in the treatment of paludism. Other authors claim good results and Paucot, of the French Army Medical Corps, has used spleen therapy, summing up as follows:

"This treatment has given me results incomparably superior to those which I have secured from other methods of treatment. It seems to succeed in every case of chronic splenitis, save only where the spleen has acquired a stone-like hardness and has become adherent to the diaphragm or abdominal wall. Even then, however, there has been amelioration. The general condition is rapidly benefited. The men are so thoroughly cured that they are able to continue their service, thus obviating a considerable expense and loss of men to the government."

Lamballe, of the British Royal Army Medical Corps, used the pancreatic ferments, trypsin and amylopsin, hypodermically in the treatment of malaria and reports good results following their use. He says, "Clinically, the results are most marked. The change in the patient within a few hours is remarkable and the benefit permanent."

The thyroid, with its well known antitoxic and protective part, is undoubtedly indicated in such an infection as malaria and the stimulating effect of small doses of thyroid on the suprarenal glands.

A combination containing desiccated spleen, pancreas, thyroid (1/16 grain to the dose), entire suprarenal substance (1/4 grain to the dose), has been made available under the name of "Bogen." While we have no further knowledge of this remedy and have no particular desire to advertise

it to our readers, we are decidedly interested in the combination of desiccated spleen, pancreas, thyroid and suprarenal substance. Nor is it necessary to secure any special preparation of this combination. It is quite possible to prescribe combinations of the separate substances which are offered to physicians and druggists by several concerns in the United States that specialize in the production of endocrine remedies.

ABSCESS OF THE PAROTID GLAND

An abscess of the parotid gland is considered a bad omen when it occurs during the course of a chronic affection; but, when it accompanies or follows pneumonia it has a particular significance. Many inflammations of the parotid gland resolve; but, when pus is present, incision and drainage should be instituted.

An opportunity here presents itself to caution against long-continued drainage by means of gauze and tubes in any kind of an infection. Pus cavities need not be drained with tubes and gauze longer than seventy-two hours. The tract is kept open by daily irrigations and application of dichloramine-T or other medicaments.—[Moses Behrend, *N. Y. Med. Jour.*, Apr. 6, 1921.]

HINTS ON STOPPING INTERNAL BLEEDINGS

There is no internal substitute for pad and bandage, says Gordon (*Can. Med. Jour.*, Oct. 1920); but, starvation and morphine with rest in bed are often effective in hemorrhage from pulmonary or gastric ulcer. The person who is vomiting blood is best off lying down, quiet and undisturbed; trying to undress him may forfeit his life. Examine him later. Give no drugs or food by mouth. Ice is of little or no value in stomach ulcer. Tradition has it that the feet should be elevated but this is a mistake, thinks the author. A low blood-pressure is rather what is wanted, inasmuch as it favors the formation of a blood clot.

From 1/6 to $\frac{1}{2}$ gr. of morphine should be given hypodermically in such cases.

If the pulse keeps good, surgical interference is not advised; if not and the bleeding continues, or recurs at intervals, thereby threatening to deplete the organism, operation is necessary.

Following a severe hemorrhage, give

nothing at all by mouth for at least 48 hours; then water in teaspoonful doses. At the end of 72 hours, small doses of milk are allowable.

The foregoing applies to bleeding from the lungs, as well; also to hemorrhage occurring in the course of typhoid fever. Bandaging the thighs to the point of cyanosis helps to lower the blood pressure; this measure and, perhaps, transfusion of saline solution, are to be reserved for critical conditions. The bowels may be moved in five days; and then by an olive-oil enema.

Transfusion of whole blood is offered as the sheet anchor in the treatment of mediæl hemorrhages, generally. Absolute indications for it are: constantly dropping hemoglobin and a blood pressure approaching 70 systolic.

VACCINE TREATMENT OF GONORRHEA

C. Ahronheim (*Therap. Halbmonatsh.*, Sept. 1, 1920) finds that vaccine treatment does not influence gonorrhea as such, immaterial whether it is recent and acute or chronic. However, this form of therapy renders splendid service in all sorts of complications that may accompany the gonorrhœal inflammations of the urethra.

As to the mode of administration, the author objects to intravenous injection, which gives rise to high temperature reaction and to chills, while affording by no means better results than the intramuscular administration.

The author gives as indications for the administration of vaccines, first of all epididymitis which he treats with injections of 25 million germs into the gluteus muscle. At intervals of 4—4—6 days, he injects 50 million—100 million—100 million germs. When the treatment of the gonorrhea itself is concluded, a further dose of 50 million germs is administered. The pain of the inflammation is said to disappear after the second injection.

Of course, the patient is best kept in bed, the swollen organ being elevated. The author warns distinctly against cold or ice compresses, which frequently give rise to serious inflammations.

The second indication for vaccine treatment is, prostatitis in which he also administers 50 million germs, following, four days later, with 100 million. According to his

opinion, from three to four injections are sufficient to allay the inflammation.

In women, vaccine treatment is of particular use in gonorrhreal inflammation of the ovaries, from four to five doses at four-day intervals being sufficient usually to ease the pain. He has found this treatment of value especially in cases where women were infected innocently.

A final employment of vaccine treatment is for the purpose of so-called provocative irritation at the end of the treatment. That is to say, an injection is given in order to determine whether the resulting reaction will give rise to the further elimination of gonococci. In a positive case, of course, treatment will have to be continued while, in the event that no gonococci make their appearance, the patient may be assumed to be cured.

We believe that repeated examinations and continued observation are necessary in case of gonorrhreal urethritis in order to establish the permanency of the cure and to guard against possible later effects.

AS TO ACRIFLAVINE

The new germicide derived from coaltar, first used by Ehrlich against the trypanosome infection and later taken up by English surgeons for the treatment of infected wounds, is being addressed in this country at the present time almost exclusively to the gonococcus. As a gonococcicide, it seems to be quite generally satisfactory. A number of reports have appeared. In the main they are favorable. Keyes, for example, says that he is getting excellent results from one of the weaker solutions (1:5000) used as an irrigant. According to Ashcraft, one may expect it to control the discharge in from one to six days in 61-percent of the cases treated. Burchfiel, reporting a series of cases, concluded that (1) it is highly toxic to the gonococcus; (2) it causes a minimum of injury to the urethral surface; (3) it possesses in a high degree the power of penetration to the deeper parts; and (4) the average duration of the infection under this treatment is distinctly less than that with the usual methods.

Occasionally, acriflavine fails as signally as it succeeds in most cases. It is hard to account for this. Davis opines that failure in the exceptional cases may be due to an especially susceptible urethra or to ana-

tomic anomalies in the way of inaccessible crypts. It may be so. And again, it is observed that cases not responding usually have high urinary acidity. Properly, the urine should be alkalinized for best results.

Apart from its use in gonorrhea, what may we expect of this new germicide? The following from a paper by La Favre (*U. S. Naval Medical Bulletin*, Oct. 1919) is significant:

"Acriflavine seems to destroy the treponema pallidum instantly. In one experiment, we observed its action under dark-field illumination. A 1:100 solution when passed under the cover glass caused all motion of the spirochetes to cease instantly, and there followed in a few minutes a complete disintegration of the organisms."

Here is a clew to follow. It is just possible that we have in acriflavine an effective weapon against syphilis. We hope that experiments will be made to ascertain whether or not this is so.

A foreigner, Ganguli, has found it useful in coccal infection of the eye. In diphtheria infection, it proved more quickly effective than quinine. He used a 1:1000 solution in gonorrhreal ophthalmia with results that led him to believe that the flavine might well displace the silver preparation in many cases.

The value of 1:4000 solutions injected intravenously in septicemia and pyemia is attested by Whitehouse. He gives one and, at times, two injections a day, into the median basilic vein, in much the same way as the arsenicals are given in syphilis. So far, he has carried all his patients through successfully with this treatment.

VACCINE TREATMENT OF BARBER'S ITCH

A French physician, Doctor Renaud-Batet (*Paris Médical*, Feb. 19, 1921) reports very satisfactory results from his treatment of sycosis by means of an autogenous vaccine containing staphylococci. Recovery was always prompt.

Since 1916, he has treated several hundred cases of this affliction without a single failure and without, as far as he knows, any recurrence of the trouble. Although he has been in communication with a great number of his cured patients, not a single one has informed him of a relapse.

Let's Talk it Over

Professional Dishonesty

RESPONDING to a hurry call into the country, I was met by the patient's mother, near the house, with "hurry, doctor, it's coming." Throwing off the coat, I stepped to the bed where the patient lay uncovered, with labor well advanced, vertex presentation in L. O. A. position. The patient begged for chloroform, but, seeing her limbs so markedly edematous and bluish, I sprinkled only a few drops upon a napkin, handed it to the husband who placed it over the patient's face while I scrubbed up.

When I was ready to assist, delivery was just about complete and another man-child claimed our attention, a lusty eight pounder. He was handed to grandma who proceeded to anoint him with oil and to robe him in his first dress. During this time, I attended the mother who was very cold; wrapped her limbs in warmed flannels, and placed heated sad-irons properly wrapped at her feet. Expulsion of the placenta occurred about ten minutes after the delivery and, excepting for a slight laceration, an old one, the indications called for quiet and warmth. Repair could be attended to later.

The patient complained of feeling chilly, her pulse being rather weak and small. So, I administered a stimulant. Now, she wanted to know whether she was torn; to which I replied that after a normal labor like hers, and, furthermore, her third confinement, there would not be much of a tear if any. I thought it best not to excite her nor to expose her body any longer at this time. Soiled clothing was removed and replaced with clean warmed articles. The patient felt fine and I left with some instructions as to diet and other matters, promising to return in due time.

When nearing the auto, I saw Dr. B. arriving in a closed Ford Coupé with his dog companion. He alighted, snatched a pound roll of cotton from the seat and placed it under one arm. This was not

wrapped; so, must have been in use as cotton could be seen from both ends. He took a small grip and started for the house, without paying any attention to me or the husband. I told the husband that he must not let the doctor touch the patient, since it wasn't safe and there was no need for it anyway.

This happened about 11:45 a. m. At about 3 p. m., the husband called at the office leaving instructions that I must not call again, as Dr. B. would take care of his wife.

The next day, on meeting the husband, I asked how it all came about. "Well, doctor, you left my wife in bad shape, badly torn and didn't fix it up." "Did Dr. B. examine her to learn of the tear?" "Yes, he did." "Did you see him come from his car, away from his dog, with the same clothes on, go to your wife's bedside and begin action?" "Yes, of course, he had no other clothes."

When such a doctor has puerperal fever cases, it means milk leg, up in this neck of the woods. Yet, he gets away with it.

Case 2. An old lady, suffering from cerebral hemorrhage, unconscious, I found her in a sitting posture and removed about half the pillows, left some medicine with directions, and said that I would call in the morning. As I made the morning call, Dr. B. was in the house. A son of the patient came out before I could leave my auto, to tell me I need not come in as Dr. B. was there and that he had told them I left the patient in an awful condition. Well, I admitted that I left her as much paralyzed as I had found her. However, he claimed that I should have left her sitting up.

Now, give it to me too.

A Reader of THE CLINIC for Twenty Years.

[We should like to have Dr. B. before us, say, in the chair in which our secretary

takes dictation. It would give us particular pleasure to tell that medical pirate in plain United States just what we think of him. We might have to move the manuscripts on our desk, for fear of scorching them. But, that would be small trouble. Unfortunately, the medical profession harbors quite too many of these thieving gentrified whose lying perversions of the truth cause their honest colleagues so much trouble. Often, these miserable tricksters are shining lights in the medical society and have a fairish following of sycophantic disciples with like tendencies who conduct themselves like hyenas. We have known these backbiting, case-stealing scoundrels to be prominent in church and lip-worship regularly on Sundays—perhaps after having cheated some poor struggling colleague out of the good opinion of a client. We have. . . Oh! what's the use! Why do the many decent physicians permit the few blacklegs to persist in their nefarious practices? Can't they be ostracised? They could, if all their honest physicians in the town would act according to their convictions. Why don't they?—Ed.]

"MODERN MEDICINE" CHANGES NAME

With its May issue, the name of *Modern Medicine* was changed to *The Nation's Health*, so we are informed. This was done to make the title of that publication more clearly descriptive of the present scope and of the new and greatly enlarged service of the magazine in health promotion and conservation.

The change is one which has been under consideration for some time. It is the final step in the development of a magazine which, it is confidently expected, will be of distinctive service to those who are in positions of responsibility for the nation's greatest asset, the health of its citizens.

The change of name and the broadening of its field of endeavor complete the transformation of the *Interstate Medical Journal*, the predecessor of *Modern Medicine*, from a publication devoted to clinical medicine, to a health magazine of broad national service—a magazine devoted to community, industrial, and institutional health problems.

The Nation's Health will continue those features which have proved most interesting and serviceable to the readers of *Mod-*

ern Medicine; but it will cover the subjects treated more completely, and in addition inaugurate other features which are important in the new and wider field.

"INSTRUCTION OF PATIENTS WITH VENEREAL DISEASES"

The communication by "A Reader" (March issue, p. 193), in which he comments on his sad experience with a gonococcal infection, reveals a state of affairs that has long since been recognized by conscientious and thinking physicians as the *bête noire* of urology.

The writer blames his physician or physicians for what he thinks is neglect of plain duty. Yet, without knowing all the circumstances attendant on his case, it seems a very difficult matter to pass judgment with justice.

It is recognized by all urologists that both acute and chronic gonorrhea, so called, are conditions that have been taken altogether too flippantly, both by the average general practitioner and the public. It is but lately, through a wide-spread propaganda, that more light on this very serious condition has been diffused so that there is scant excuse to plead ignorance as regards the seriousness of the infection and the difficulties pertaining to a radical cure. While I disagree with those who still believe in the dictum, "once a gonorrhœic always a gonorrhœic", the road to success is not an easy one and delicate methods requiring painstaking attention to details and full, prolonged and earnest cooperation on the part of the patient, are the *sine qua non* for a complete cure.

Cultural control is of prime importance. Where, after prolonged period of irrigations or similar treatment, the discharge has disappeared and evidences of focal irritation are entirely absent, no cure must be assumed until all cultural methods of control, including that of incubation of artificially produced discharge from the urethra, have been exhausted.

On the other hand, there is no dearth of cases in which prolonged treatment has failed to arrest the discharge, causing both physician and patient to regard the methods used as ineffective; and the discharge stops either by ceasing all irrigations or by substituting indifferent remedies. These cases have been subjected to "overtreatment",

the discharge being due to irritation and not to bacterial infection.

Finally, other things have to be considered. Without an endoscopic study of the lesions existing in the urethra, lesions characterizing themselves by scar formation, ulceration, and so on, a cure will not ensue as long as one relies upon antigenococcal irrigation or injection. Here, only the employment of instrumentation and of topical application will produce satisfactory results.

It is needless, after what has been said, to point out that there is no general treatment that is sure to produce results in all cases; that each case represents a scientific problem which must be solved as a distinct entity in accordance with the special indications presented, and that modern urology has, fortunately, sufficiently advanced to afford us the means of controlling gonococcal infection of the urethra.

Slipshod and routine methods will only lead to disappointment and, often, to disaster.

In conclusion, I would suggest that there is no reason shown by "A Reader" to criticize the treatment he has received, as far as it went.

Whether or not he has completed a course along the lines indicated above is, of course, a matter which cannot be settled without further details.

LOUIS SAVITT.

Chicago, Ill.

A GOOD PLACE TO GO FOR A VACATION—AND A GOOD PLACE TO SEND YOUR PATIENTS

I have been spending my week-ends for the last month at Sulphur Lick Springs Sanitarium at Wedron, Illinois. Two members of my family are stopping there for a rest and for the baths and other medical treatment. They like the place, and so do I. It has one of the nicest locations you can possibly find. The sanatorium is on the shore of the beautiful Fox river and is surrounded by a natural forest. The nearest town of any consequence is Ottawa, which is nine miles away; so, there are no distractions, and a person can rest, look at the scenery, and drink in the sunshine to his heart's content. However, there is plenty to do, for there are beautiful walks, a nine-

hole golf course, and various other diversions.

The sanatorium itself is modern in every respect, and has a complete equipment for electrical, hydrotherapeutic and other physical methods of treatment. A new addition has just been completed, which doubles the capacity, and there is a number of cottages for those who prefer them.

The sanatorium is located on "the Starved Rock trail" and is readily accessible by automobile from Chicago or elsewhere. Many people who are not sick spend a few days there to rest, play golf and have a general good time; in fact, it is a dandy place for a vacation. I much enjoy going down there myself for week ends.

I am glad to recommend the sanatorium to any doctor looking for a good place to send his patients—a place where he can get the most modern accommodations and all the advantages of country life, at a price within the reach of the average person. Dr. R. C. Miller, medical superintendent, is one of the best fellows I know. If you will write him, he will tell you all about it.

A. S. BURDICK.

Chicago, Ill.

MEAT FOR THE HOSPITAL

Probably, there is no class of caterers who have a harder problem than the persons who plan for the hospital meal. Here, they plan for the hard-working help, the brain worker, the convalescent or the sick person with the finicky appetite—the ordinary as well as all the various special diets. Here, more than anywhere else, a knowledge of the use of the different cuts of meat is desirable. The appetite-appeal is very important. The successful dietitian is one who can use the same kind of meat many times and have it look and taste different. Nothing is less appetizing than to have the meal come to the table, day after day, looking and tasting each time just like the previous ones.

With these thoughts before us, let us consider the so-called cheaper cuts of meat with the wide variety of preparation they are susceptible to. The round, rump, shank, plate, flanks and chuck constitute three quarters of the weight of the entire carcass. The heavier cuts are less expensive, because the demand is for the

loins and steaks that need no special skill in preparation. The long fiber, which is characteristic of these cuts, requires skill in preparation; still, so far as nourishment is concerned, we find that there is practically no difference. For instance, we find that a pound of medium-fat beef rump contains 1,400 calories of fuel value and a chuck has 1,105.

Having established a logical reason for these cuts being cheaper and realizing that there is virtually no nutritive difference between them and the higher-priced cuts, let us consider what skill is necessary to make them palatable.

One principle of cookery, which will always govern is, to subject the meat to the greatest heat first. Brown thoroughly the entire outside surface. This will preserve the natural juices of the meat. Then heat and add whatever liquid you have decided to use. Cover the pan tightly, reduce the heat and allow the meat to cook slowly until tender. During the entire process of cooking, after the liquid has been added, the temperature should be below the boiling point.

The seasoning of any dish is important to make it palatable. The enormous shipping facilities of today enable us to procure an endless variety of spices, herbs and seasonings. These make possible so many combinations that one seldom needs to use the same flavor twice. Thus, two meat dishes, although they are made from similar cuts, need not taste the same but can be varied freely.

For some who do not care for the piquant flavor of the spices, or in cases where the carbohydrate content of the vegetable may be desirable, the vegetables may be added to the meat and cooked with it. In the case of children or others who think they don't like certain vegetables, such as carrots or onions, the vegetables may be removed from the juice before the meat is served.

Next is the appearance of the dish. If you have ever had a long siege of illness you can sympathize with the person who will turn away leaving his meal untouched or the one who will eat it under protest. It is so easy to make a little change in the appearance of a dish. Have the portion neat and the garnishings fresh and clean. There is every reason why the hospital should be genuinely concerned over

the appearance of a tray no matter how strict the diet of the patient.

Such points are important also when serving the meals of the workers, as they help to eliminate waste. A hard-working man or woman will eat all the food on his plate if it is well seasoned and appetizing in its appearance.

[These suggestions, which were presented to us by a member of the Department of Economics of Armour and Company, Chicago, are very excellent and hold good not only for the use of the hospital dietitian but also for that specialist in dietetics, the housewife. The cost of meat is an important item in the family budget. If the housewife can learn to utilize and prepare tastily the less expensive cuts, her family will gain in the nutritive benefit to be derived from those parts of the beef carcass that ordinarily are either refused or are cooked up into somewhat unsavory and even unattractive messes.—ED.]

TUBAL OR EXTRATERINE PREGNANCY

About the first of January, 1921, I was called to see Mrs. E., who was having a good deal of pain in the lower part of her abdomen. Mrs. E. is 35 years old; previous health good, excepting some little minor troubles in childhood. Her menses were regular, with some little pain preceding the flow. She had been married six years and this was her first pregnancy. She had missed about two and one-half months; during this time she had some nausea but not more than usual.

The last of December preceding her sickness, the family changed residence. She was now sleeping in the second story of the building to which they had moved. I attributed a large part of her trouble to climbing the stairway several times a day. She was put to bed, given uterine sedatives and occasionally an opiate to relieve the pain; but she did not follow my instructions very closely. In four or five days she began to bleed a little. A little ergot was added to my uterine sedative; this controlled the bleeding for a time. About the 9th of the month, she began to bleed more and passed some membranes also.

By the 12th, she began to have some fever with a great deal of odor to the dis-

charge. We did a curettage which cleared up the fever and bad odor. After this, she got along nicely for about a week. She was sitting up some in a rocker near the fire, five days after the curettage. On the 23rd, I was called back and found her in bed, very weak, tender, with abdomen distended just a little. I was informed that, while getting up that morning, she had a fainting spell and had been very weak since. This fainting spell was preceded by a severe pain in the lower abdomen.

I was a little puzzled to determine what had brought about this change. I examined vaginally and found the posterior cul-de-sac bulging. This did not help me much in my diagnosis; still, I thought I must have a pus case. So, I decided to wait until the next day.

The next morning I took two of my neighbor doctors with me. After examination, they concluded that there must be pus in the abdomen; the uterus was pushed up against the bladder and the posterior cul-de-sac was protruding still more. The reputation of the husband, according to one of my confreres, was not very complimentary; so, what else could it be?

We decided to open the bulging portion of the cul-de-sac and drain out the pus. After some preliminaries, we opened the cul-de-sac and, to our surprise, it was blood that came away; and, a lot of it. Most of it was clotted and hanging down like icicles in winter time. After some discussion, we decided to remove these blood clots extending from the tube; enlarging our opening a little, we removed something more than a quart of clotted blood, including membranes. The space from where we removed the blood clots was packed with iodinized gauze. This remained twenty-four hours and was then removed.

I wish to state that I stayed with this patient most of the night following the operation and gave her intravenous salines, which seemed very necessary for my personal reputation. At present, February 20, she is doing well.

Was this a case of uterine and tubal pregnancy, both at the same time? If not, what was it?

I have read and heard of tubal pregnancies but never had one in my practice before, if this is what it was. I saw nothing of a fetus; this, though, could have escaped my attention as the blood was not

examined after operation. My old professor never gave me a hint that such a thing would happen in my practice, especially such a double-barrel complication. After all is said, I think I have learned a lesson. First, I blame myself for being so stupid not making the right diagnosis. Second, after finding out that it was blood and not pus we were dealing with, the abdominal and not the vaginal route should have been selected for removal.

J. C. HARRIS.

Collins, Ga.

[It seems quite evident that this was a case of ruptured tubal pregnancy. Dr. Harris is to be congratulated on having come out of it so well. However, we are inclined to think that the patient will bear careful watching for some time; as, many times, retained portions, either of membrane or of blood, may set up trouble. We believe that opening the cul-de-sac was the logical procedure, unless the diagnosis of tubal pregnancy had been made deliberately. That this possibility did not occur to the attending and consulting physicians, can not be held very blameworthy. It is well known that the diagnosis of a case depends, in part, upon those possibilities that happen to enter the physician's mind. Tubal pregnancy is not of such very frequent occurrence, fortunately, to be in one's mind constantly or to enter it readily—unless one has observed a case once. Then, to be sure, one will never forget it.—Ed.]

FEEDING THE BABY. ENDO-CRINOLOGY. GROUP MEDICINE

I believe that I was on the original mailing list of the ALKALOIDAL CLINIC; at least, I used to get it when it had the physical appearance of a Sunday-school quarterly. It has always been full of good things and has been of great service to me in my practice.

In asking me what I would like to read about: I would like to know more about feeding the baby. Personally, I have come to the conclusion that, instead of studying baby foods, we should study the baby and the diaper. All of us know about whole milk, buttermilk, top milk, milk that is not milk at all, peptonized milk, dextrin, non-protein, and so on. Now, the gentleman

in the corner arises to remark that, if that baby has the right kind of a mother it will not need any but her milk. I should welcome a series of articles on the baby.

I should also like to know more about endocrinology. While it does not give the brilliant and visible results that surgery does—is it going to put that out of business? As a general practitioner of medicine, should I become interested in, and know all I can learn about basal metabolism, with the intention of applying that knowledge, and purchase instruments, to be successful in my work, or does that belong to the laboratory and should I let the laboratory man look after that part of the study of the endocrines?

Concerning group medicine in the smaller cities and manufacturing communities: It looks to me, if you can look at it from the viewpoint of a square-deal to all and without benefiting unduly any exclusive one person, the following plan should be a success: Make one or more factories with 2,000 employes a unit. They will organize a clinic. This clinic is governed by a board composed of an equal number of physicians, employers and employes. The employes pay so much a week for the medical services to themselves and their dependents. The physicians divide their work. Surgeons, eye, ear, nose and throat men, obstetricians, and so on, each of the twenty physicians having a major and a minor specialty. Each of them shall attend a postgraduate course for at least one month each year. The clinic has first call on his time. Outside of the time required by the clinic, he would be a general practitioner or a specialist, as he pleased. No one would have anything to say about his business outside the clinic and only the Board would regulate his action to us inside.

I make this a very brief sketch but I believe you get the idea.

B. B. MORROW.

Muncie, Ill.

[The care of the baby is largely a dietetic problem. Thus, the question of how to feed the baby always is of interest. We hope that somebody will accede to Dr. Morrow's request and write about it.

Endocrinology undoubtedly is an important study. The investigations of the functions of the glands with internal secretions have made it possible to understand

many phases of ill-health that had been obscure previously. Likewise, the administration of many endocrine substances is of manifest benefit especially in infectious maladies. As to the study of the basal metabolism, we believe that this had better be left to the laboratory man who should inform the clinician of his findings. Left to the clinician, the determination of the basal metabolism would all too often be neglected. Yet, it is frequently of advantage to be informed of it.

Dr. Morrow's suggestion as to a plan for group medicine is open for discussion. It seems to us that it might work well in many small towns, especially manufacturing centers.—ED.]

BREAKFAST WITH A VITAMINE MOTIF

A recent letter issued by the American Chemical Society News Service contains an interesting menu for a breakfast that is arranged with a view to its vitamine contents.

Most of us have a bowing acquaintance with vitamines. We know vaguely that these mysterious substances occur in some foods, and that without them we die. In our modern life, moreover, we realize the desirability of continuing to live, and to live well, in every sense of the word—for, how can life be worth while if one is ill?

But, how to translate our knowledge of vitamines into terms of the daily menu is a problem that now challenges every housewife.

The scientific facts concerning these vital life forces have been thoroughly set forth in recent journals of the American Chemical Society and also in a popular work on the subject written by Dr. Benjamin Harrow, a member of that organization. Certain easily obtainable foods are rich in vitamines, we are told. Why not add them to our daily bill of fare?

For instance, here is a breakfast with a vitamine motif:

<i>Menu</i>	<i>Breakfast</i>	<i>Vitamine</i>
Orange	Antiscorbutic
Cereal with sugar and milk	Fat soluble A
	Water soluble B
Scrambled eggs	Antiscorbutic
Butter toast and butter	Fat soluble A
Coffee with cream	Fat soluble A

This menu contains all three of the vita-

mines so far located. In the orange, for example, one finds the antiscorbutic vitamine, which occurs in all fresh fruits and vegetables and in many other foods, and prevents scurvy through its tonic effect on the system. Ordinary uncooked milk, such as used with the cereal, has a large amount of fat soluble A, found also in butter, eggs and cream, all of which are represented here. This vitamine keeps the body in a well nourished condition—blindness and ultimate wasting away of the tissues result from its absence in the diet. In milk likewise is the antiscorbutic vitamine (in small quantities) and a considerable quantity of the water soluble B variety, present too in yeast, the husks of rice and other products. Lack of water soluble B causes the disease known as beriberi.

Incidentally, most of the foods which contain vitamines are general favorites, and the repast described above has long been a popular one with many of us. Now that modern science has shown its true value, it should be even more so.

WANTED—A MEDICAL MISSIONARY

A nation-wide search for a man, who is greatly needed but who may not exist, is announced by the Presbyterian Board of Foreign Missions, 156 Fifth Avenue, New York City.

"We must have him," and "There isn't any such a man," representatives say, almost in the same breath.

Wanted—A Doctor! That seems simple, but, the Foreign Board's specifications have so narrowed the field, that up to date, not a solitary candidate has been found. The doctor must be under 35. He must have a knowledge of psychiatry or be willing to learn at once the rudiments of that science of mental diseases. Such a man is greatly needed in the medical missionary work of the Presbyterian Church, for a special task in China.

Twenty-three years ago, for the first time in the long history of China, a hospital for insane was opened in that land, by John G. Kerr, M. D., LL.D., in Canton, where, many years earlier, foreign medical work had had its very beginning. More than forty years of his life had already been spent by Dr. Kerr in the ministry of healing as a medical missionary connected with the Presbyterian Church, North. Being 73 years of age when he took up this new work, he was obliged after three years to lay it down. But, this time was long enough to see the enterprise which he had long wished to inaugurate a growing institution.

Its reason for existence was, to extend asylum treatment to Chinese insane, and to give to the recovered patients and their vis-

iting friends, as well as to the helpers and neighbors, by word and by life, an opportunity to hear and see the Christian gospel of salvation and service.

The hospital has now a population of more than 100, and it would have been much larger, had land and buildings been available for all for whom admission has been sought.

With the exception of Mrs. Kerr, in charge of the evangelistic work, and of two American physicians, the staff and helpers are all Chinese. Another American physician is needed. Few are offering their services for foreign mission work and few have made psychiatry or mental diseases their specialty. Thus far, no man with all the proper qualifications has been found to answer the call.

The Presbyterian board asks, is there not some physician in the United States with a desire to help give the gospel to the people of China, a physician having a knowledge of psychiatry, who is not above 35 years of age, and who will volunteer for this service?

If this call reaches some Christian physician, even without a knowledge of psychiatry but willing to spend a year or two in special preparation for practice among the insane, the Presbyterian Board will be glad to get in touch with him. It is not at all necessary that he be a Presbyterian.

Walter I. Clarke, Publicity Director,
Presbyterian Church in the U. S. A.
156 Fifth Ave., New York City
Telephone Watkins 7096.

TREATMENT OF BURNS

There is hardly a home which, at some time or other, does not call a physician to treat a burn received by some member of the family—usually a child. And, there is not an emergency that demands quicker action, more composure and good old common horse sense on the part of the physician than does an extensive or deep burn. For, by the time the doctor reaches the home, all the neighbors have gathered offering their sympathy and suggestions as to what should be used on the burn. All these various remedies, such as molasses, soot, tar, blowing the fire out of the wound, talking the fire out of the wound, and so forth, have usually been tried, with new ones being suggested by each new neighbor who happens to be a little late coming in.

So, the first thing that should be done is, to clear out all the spectators with all their numerous remedies, and endeavor to combat the shock while relieving the patient of pain. This may be accomplished by the administration of morphine and atropine, the size of the dose, of course, depending on the age of the patient. Often, a dose or two of paregoric will suffice. If stimulants

are needed, aromatic spirits of ammonia or strychnine may be used. However, so far as internal medication is concerned, each case is a law unto itself; therefore, it depends upon the actual needs of each individual case what drugs should be used, if any.

Now, as to the dressings: A plain burn is usually sterile unless it has been contaminated by some of the numerous home remedies usually employed, or has been otherwise infected. If the wound is not clean, it should be cleansed as well as possible in the beginning of treatment, by bathing with a warm solution of boric acid. Then, after drying as thoroughly as possible, the wound should be well covered with a parresine dressing. This is best applied with an atomizer, the wax being melted in a double boiler and sprayed well over the edges of the burn until a good thick covering has formed over the entire area. The parresine may also be applied with a camel's hair brush or a stiff cotton mop. But, when sprayed on, it is much less painful and can be more evenly applied. The layer of the paraffine-wax preparation should be covered with the specially prepared cotton dressings, bandaged and left alone for twenty-four hours.

I think that it is a mistake to bathe a burn and change the dressings every few hours. Just watch it and change the dressings when necessary.

The parresine not only helps to relieve the pain; the serum that exudes underneath the dressing promotes healing and rapid growth of new tissue. These dressings should be changed once every twenty-four hours for the first few days and then every other day, depending on the amount of exudation and the general condition of the patient as to to toxicity and so on. Usually, by the end of the first week, even in a deep burn, spots of new tissue can be seen here and there over the wound and around the edges. By this time, the dressings should be changed every other day. The parresine dressings lift off very readily and without pain to the patient, thus causing less discomfort than any other dressings that can be applied. It is surprising how small a degree of scarring there will follow if these dressings are used.

On the 21st of February, last, I was called to see a child, 17 months old, severely burned. It had been left standing before an open fire. Its clothing caught on

fire and, before the flames could be extinguished, it was severely burned on each knee, one hand, the face, mouth and nose; and a very wide and deep burn was on the abdomen.

On reaching the child, I gave it the usual remedies used for the relief of pain and shock. (In this instance the shock was very great.) I then applied a 1-percent solution of picric acid which I continued for the first twenty-four hours. After this, I used the parresine dressings as described. The second day, the child had two hard spasms, with temperature (axillary) to 103° F., where it persisted for one week. During this time, the child seemed very toxic. However, by the end of the week, small spots of granulation could be seen here and there over the burned area; the temperature gradually descended to normal. The dressings were applied every other day and, by the end of the third week, all of the burned area was practically healed with the exception of the one on the abdomen which was much deeper and wider than any of the others and required several more dressings.

In this case, where it seemed almost impossible to save the life of the child, I do not believe that we could possibly have used anything that would have been more conducive to the relief of pain, more favorable to the growth of new tissue, and less productive of disfiguring scarring than the administration of parresine.

In conclusion, let me say that my idea in presenting this little paper is not, that I have anything new to present; for, probably, all of you have been using parresine for some time. If you have not been using it, let me recommend it to you; for in my mind, it is one of the best remedies that can possibly be used in the treatment of burns.¹

JAS. A. MARTIN.
Lumberton, N. C.

"THE ESTATE THAT PHYSICIANS LEAVE BEHIND THEM"

All that you write on this subject (this journal, April, p. 218), I uphold. I wish, however, to make an addition and it is this.

The members of the medical profession, especially those at the top, are much to

¹Read before the Robson County Medical Society, April 13, 1921.

blame for the small estate that the general practitioner leaves to his dependents when he goes "west." If they taught people, as they should, that their family adviser is the one to whom they should pay the largest fees, and not the consultant or the specialist, justice might be served and things righted. The patient is often well meaning and doing—if he knows the truth; but, how can he know if he is taught incorrectly, as he now is almost invariably?

Under existing circumstances, in his direst extremity, day and night, he calls upon his medical adviser and truest friend, to take care of him and bring him back from death's door and, later, pecuniarily, that friend gets a meager return. When the consultant, or specialist, is called in, he it is who gets the credit and reaps the reward in money. He knows well enough, in nine cases out of ten, that he has really added very little to the immediate or permanent benefit of the patient. Let him, then, say frankly and truthfully and do nothing, advise nothing, without the absolute endorsement of the family practitioner, and let him always impress it upon the family and friends how much indebted they are to his foresight, care and most valuable services.

One or several of your readers may say, we can not do what Doctor Robinson advises. If we did, we would finally lose many of our clients or we would not be able to charge our now large, often exorbitant fees. Alas! The pity of it! But, the truth and right of it all will, I believe, ultimately prevail; if not immediately, then some time soon; I hope and pray.

BEVERLEY ROBINSON.

New York.

"PSEUDOMUMPS OR WHAT?"

Your editorial, entitled "Pseudomumps, or What?" (April issue, p. 213) is responsible for this report:

March 18.—Georgie S., Japanese, three years old, has suffered from quite a severe attack of eczema, involving the face very badly, and also other parts of body. Under treatment by "skin specialist". On March 17, at noon, there was some fever. When I saw him, at 6 p. m. on March 18, the temperature was 103.2°; pulse, 116; lips, cracked and bleeding; breath offensive. The little boy had complained, yesterday, of sore throat. Still, the throat was negative,

tongue, coated; teeth in good condition. Constipated for several days.

March 19.—Temperature 99°. Very much better; wants to be up. Slight swelling under right ear. A probable diagnosis of mumps was made.

March 30.—Was called to see him again and found a large, red, hard tumor under the chin—an infection of the submaxillary gland. The pulse was 90; I did not take the temperature. Appetite was good; the boy was playing about.

April 1.—Lanced the abscess, evacuating a good deal of pus; however, most of the tumor was still very hard. Hot applications of magnesium sulphate were and had been applied since March 30. I saw him again, April 12. On opening the incision, just a little thin serum escaped. There is still some enlargement and induration present. The boy is eating and sleeping well. Feels fine.

J. M. McGAVIN.

Portland, Ore.

[This is interesting in view of the fact that the infection of the submaxillary gland progressed to suppuration. That, we believe, might probably have been prevented by calcium sulphide to saturation or by echinacea. Energetic elimination is, of course, always indicated; preferably by means of calomel followed by a saline laxative.—Ed.]

THE PUBLIC HEALTH INSTITUTE

From Dr. H. S. Cumming, Surgeon-General of the U. S. Public Health Service, comes information as to the splendid success of the institute on venereal-disease control and social hygiene recently conducted by the Public Health Service. This success permits the inference that public health officers, practicing physicians, nurses, social workers and clinicians are eager for more training and that they will come long distances to get that training (650 attended the Venereal Disease Institute) when the best kind of instruction is offered to them.

The Service, therefore, proposes to conduct a general public-health institute to take place during the fall of 1921; and to offer 25 to 30 courses including the following: diagnosis and treatment of tuberculosis; nutrition in health and disease; sanitary engineering; clinic nursing and social

work; clinic management; courses in syphilis and gonorrhea; mental hygiene; industrial hygiene; child hygiene; vital statistics; laboratory diagnosis; health centers; various courses in psychology and sociology.

The institute faculty will be composed of 75 to 100 leading authorities, including William H. Welch, William H. Park, John A. Fordyce, Valeria H. Parker, John H. Stokes, Michael M. Davis, Jr., William A. White, Anna Garlin Spencer, Irving Fisher, C. V. Chapin and M. H. Rosenau. Other names will be announced later.

Physicians who are interested in this institute should write to the U. S. Public Health Service, 16 7th St., S. W., Washington, D. C., for detailed information.

TREATMENT OF GENITOURINARY DISEASES

Specializing, as I do, in the treatment of genitourinary diseases, and having been alert to investigate any and all new measures that seemed worthy of following up, I have become familiar with virtually all recognized treatments, in the course of ten years' practice. Being located in a railroad town, which is a division of the Michigan Central Railroad, I am called upon to treat from twenty-five to fifty such cases per month.

Nearly a year ago, my attention was called to a method of treating gonorrhreal infections, and complications arising therefrom, by means of an unguent that was put on the market a few years ago. I have now treated over two hundred cases by this method and can say positively that the results are not approached by any other measures of which I have knowledge. This unguent I have obtained from the manufacturers, in the form of quarter-pound jars for tampon work and wherever somewhat extensive areas were to be treated.

The "Unguentum Anti-Phlogosis" referred to is a special hydrocarbon product combined with an iodin-oleate which secures in practice three outstanding results.

1—It seems to have a remarkable power in reducing local inflammation and in healing the inflamed mucosa.

2—It is unusually effective as a germicide, it having been possible to incorporate sufficient iodine in it to give it this quality without producing irritation or destroying tissue.

3—The well-known ability of iodine not

only to promote leukocytosis, but also to stimulate the tissue cells to increased metabolic action, seems to be accomplished by this preparation in an exceptionally effective manner.

For males, this unguent is furnished in a collapsible tube, with a control key for regulating and expelling the desired amount. A urethral tip is also furnished which is perfectly adapted for use in the anterior urethra.

I may describe my findings and methods, which have been developed through large experience, as follows:

1—Urethritis; acute. Average duration, fourteen days. Negative smear in from seven to ten days, depending on the severity of the case, also on its duration, on previous treatment or otherwise.

2—Urethritis; simple or nonspecific. Average duration of treatment, three to five days, depending on the severity of the case.

3—Urethritis; chronic. This condition, usually having posterior complications, takes much longer to overcome. However, I find this method superior to any other recognized treatment.

4—Prostatitis, both acute and chronic, responds beautifully to daily treatments of this unguent. In these cases, I pack both the posterior urethra and the rectum.

5—in orchitis and epididymitis, the usual method of applying the unguent is by cataphoresis; then, plenty more is applied externally and covered with absorbent cotton under a large suspensory. The dressing is changed every six hours.

6—an obstinate case of periurethral abscess, with a fistula into the rectum and externally, responded exceedingly well, recovery being complete in twenty-one days.

7—Cystitis. I treated one stubborn case by injecting two drams of the unguent through a rubber catheter. The results were remarkable. At first, it was injected night and morning. After three days, once daily, then once in two days until the bladder walls appeared normal through the cystoscope; and there remained no symptoms.

8—Vaginally, the results were on the same plane as in the male urethra. The patients reported daily for tamponage. The tampons were removed the next day and a plain salt-solution douche taken. In one

case, the common methods were tried first, and each failed.

9—Gleet has responded very favorably when other modes of treatment failed.

10—Hemorrhoids of either variety respond readily, thus helping patients who refuse radical operation.

All of my cases but two have responded well. In three or four cases, a thin mucous discharge persisted, which cleared up entirely after a few instillations of a weak permanganate solution. As can be seen, the preparation is highly efficient in the great majority of cases. It is practically nonirritant.¹

The usual method of treatment was as follows: After examination, the patient is instructed to urinate. Then the urethra is lightly packed the whole length through the urethral tip. The meatus is sealed with collodion and the patient required to go at least one hour before urinating again—longer if possible. Where there is prostatic involvement, I use a deep ointment syringe, packing the urethra daily both anteriorly and posteriorly.

A. W. MARSH.

Jackson, Mich.

LETTER FROM FRANCE

The warning which the late Colonel Roosevelt sounded, while President, against "race suicide" is beginning to be heeded in France. One of the first measures taken by the Millerand Government was, the establishment of a Superior Council on Natality charged with propaganda and the institution of practical measures for the improvement of the birth-rate and the decrease of infant mortality. This Council, in a recent session under the presidency of M. Breton, Minister of Social Assistance, adopted an important adaptation of the insurance idea to the particular object in hand. This natality-insurance scheme will institute an insurance fund permitting parents, by the payment of a modest annual premium of 25 fr., to secure the relatively large capital sum of 2,500 fr. payable to them on the birth of a third child and of each additional child. The fund will also serve for a certain allocation of benefits annually to large families, beginning with the

¹The "Unguentum Anti-Phlogosis" used in these treatments and which is known as Iodized Dionol is made by the Dionol Company, Detroit, Michigan.

third child. The amounts will increase in proportion with the number of children.

This, with the tax of 10 percent on bachelors, should accomplish something in the way of encouraging an increase in the country's population.

Just now, there is a notable increase in the birth-rate in Paris, due to the fact that, since the armistice, the capital has been the home of an intense cosmopolitanism and of refugees from the liberated districts and from Serbia, Roumania, and other countries. In fact, all the maternity hospitals are full. But, at Lyons, only 216 births were registered during the month of March as against 215 deaths. Infantile mortality carries off one child in every five born in France, before its fifth year; a fact that makes impossible even an approach to an equilibrium between births and deaths. In all the other large centers, the figures show that the number of deaths, last month, exceeded the number of the births (on the average) in the proportion of 200 percent—certainly an alarming showing. While, in Paris, during the first months of 1920, the natality statistics are rather encouraging, it is not to be forgotten that, in 1919, there was an excess of 7,000 deaths over the births. The problem, of course, has been greatly intensified by the war in the course of which France lost a total of 3,340,000 from her population, including the 1,500,000 men killed in battle. Taking all the figures into account, it seems that, while the population of France in 1914 reached a total of 39,700,000, the present population, including that of the recovered provinces of Alsace and Lorraine, is only about 37,000,300. On an average, at the present time, there are only 100 births for every 200 deaths. In the last fifty years, France has suffered a decrease in population amounting to the population of fifty-one Departments. At this rate, the country will have not more than 32,000,000 inhabitants in 1940.

These are facts which tell an all too significant story. It is certainly time that the people of France woke up to its menace.

At a meeting of the "Conseil Supérieur de la Natalité," which interests itself in the birth-rate in France, recently it was shown that, especially since the end of the war, the German birth-rate has again risen much higher than that of France.

Professor Pinard presented German sta-

tistic for the Düsseldorf district, comprising 6,000,000 inhabitants, showing that the birth-rate there never fell, even during the war, to the low level of the French rate. What is more, it has now actually risen to the pre-war figure, and is at the present more than twenty births to every thousand of the population. The French figures on the other hand, show the rate to be between seven and eight births to every thousand inhabitants. This is alarmingly low.

It was further shown that the infant mortality in Düsseldorf since the war has been continually diminishing. It is now ten deaths for every hundred born, whereas in France the proportion is about twenty deaths to every hundred births.

In the effects of the war on the manhood of France, Darwinians as well as Malthusians may find arguments for and against their opinions on Dame Nature's workings. Yesterday, for instance, was really a cold day in Paris, whether one judge from personal experience or from the readings of the thermometer. And, yet, few men showed by their attire that they were aware of the fact; as for women, light, open shoes and stockings as fine as spider's webs were their only foot wear.

In the case of the fair sex, this may not seem strange, for the man in the street has long noted the caloric effect of a pearl necklace or a brilliant pendant on the barest of bosoms, and the warmth assured by open-work stockings has been demonstrated beyond question. But men, particularly Frenchmen, until quite recently, did not disguise their susceptibility to cold the handkerchief bound round the head, great comforters, and other wrappings, being common features of masculine apparel whenever the temperature was rather low.

Now—where are the wraps of former years? Evidently, they were left in the trenches with the great advance. For, yesterday, even the silk neckerchief was rare, and the younger men particularly seemed even more in their element than usual without any adjunct to their usual clothing. Is the change due to the long exposure of the combatants to the elements, to the influence of the milieu in the case of the young, or have only the fittest survived?

A panacea seems on the point of discovery with the sending of a paper to the

Pasteur Institute by M. Metalnikoff, a bacteriologist, who gives the results of experiments purporting to prove that caterpillars can destroy the bacilli of the most contagious diseases. The conclusion is that, since they have been able to destroy the bacilli of diphtheria, tetanus and plague, caterpillars could perhaps be used in making a serum to cure tuberculosis.

In his paper, M. Metalnikoff states that he has experimented on thousands of caterpillars. He is striving to isolate the digestive ferments of those caterpillars, as he claims that these elements destroy pathogenic microbes.

The allied armies, which operated in the Orient, became fully acquainted with the pernicious character of malaria.

To combat the tenacious persistency of this malady, the medical corps brought into action every resource known to therapeutics: the discouraging results secured from all known remedies and the alarming number of the troops incapacitated for active duty by the wide spread prevalence of this malady caused the Ministry of War to institute special laboratory research and urgent measures to discover some reliable agent to combat this disease. In this connection, it may be remarked that much of the remarkable advance, made in both surgery and medicine since the beginning of the war, can be traced to urgent necessity of meeting successfully the many new conditions created by army life.

In one of the Paris laboratories, Doctor Le-Tanneur produced a remedy which has now been tested three years of wide experimentation in the hospitals and among the troops and has established its reputation as a successful agent for the relief of malaria; his remedy is known as Tannurgyl. Taken regularly at the hour of the midday and evening meal, it reestablishes the normal functions of the liver, increases the appetite with a resulting return of strength, and causes the yellow color to disappear from the eyes and skin.

B. SHERWOOD-DUNN.

Nice, France.

EYE SIGHT CONSERVATION COUNCIL OF AMERICA, INC.

The Eye Sight Conservation Council held its annual meeting, last February, at the

Biltmore Hotel, New York. During that meeting, it was asserted that accuracy of vision has a vital relationship to integrity or obliquity; not only in the field of vision but in the moral field.

It was also said that ninety percent of the school children's eyes are imperfect and at least sixty percent are being used at a disadvantage. Many a child, groping with poor eyes and struggling for an education against his handicap, becomes not only a stupid child but a rebellious child, a truant child, and—a truant child is a criminal in embryo. There is no question about that; it has been demonstrated again and again. So, one of the things that this Council can do is, to circulate this information and to get it not only to the teachers, the educators and the parents, but to the children themselves.

The work of the Eye Sight Conservation Council will accomplish much good if it succeeds in bringing about universal testing of children's eyes and suitable correction of defects in vision.

PITY

Low at thine altar may all men bow down
And in contrition dedicate anew

Themselves to serve mankind and ever do
The things required of men as light is shown.
Such work as heaven approves, to angels
known,

A helpful service that will lift one through
The pinching tests, which come not to the
few

But to the hosts of men around us known.

Oh, Pity, minister to men diseased
And quiet pain in flesh, in soul, where seized:
Break through a frown and spread the
smile of joy;
Dry up a tear and agony destroy;
For this help, men the finest art employ:
Engage them now: their own woes shall be
eased!

JAS. A. DEMOSS.

Thayer, Kas.

SYPHILIS AND INSANITY

That syphilis causes a substantial percentage of existing insanity has long been recognized but, heretofore, definite statistics bearing on the subject have been meager. To supply this need, the U. S. Public Health Service questioned the superintendents of 159 State hospitals for the insane in regard to the number of inmates who had become insane by reason of the disease. Of the 115 replies received, 88 supplied

data that could be tabulated; from these, it appeared that 15.5 percent of admissions and 6.2 percent of inmates among the men and, correspondingly, 6.1 and 2.2 percent among the women were directly due to the disease. The excess in the percentage of admissions over inmates is due to the comparative short life of those who became insane by reason of the disease.

Venereal Disease and Accidents.—One of the largest telephone companies in the United States has discovered that compensable accidents that happen to its employees bear a marked relation to the incidence of venereal disease. A large proportion of accidents to linemen, for instance, have been found to mark the beginnings of locomotor ataxia, a diagnosis which is almost always camouflage for syphilis.

Questionnaire on the Segregated District.—Three years ago, the segregated district seemed too firmly entrenched in the large cities of the country to be ever dislodged. Today, according to data collected by the U. S. Public Health Service, it has few friends. A questionnaire, sent to the mayors of all large cities, with duplicates for reference to prominent men and women citizens and chiefs of police, brought 554 replies from 212 cities. The answers to the first three questions, which asked substantially whether houses of ill-fame, in and out of the segregated districts, should be tolerated, were from 80 to 90 percent in the negative. Those to the fourth and fifth questions, which asked whether both the woman and the man should be examined medically and placed under surveillance if found infected, were from 72 to 78 percent in the affirmative. Of the 110 blanks sent to 86 chiefs of police who answered most of all the questions, from 89 to 100 percent voted "right."—[From *Health News*.]

RED CROSS NOTES

Preliminary plans for a child health demonstration, unique in character and scope and promising to prove of first importance in the general movement for conservation of child life and health, have been announced by the National Child Health Council, with headquarters in Washington, D. C. With an appropriation of \$200,000 set aside for this purpose the Council, composed of six leading national health bodies, will assist some American community of

between 20,000 and 30,000 population and the surrounding county in securing as nearly as possible ideal conditions for the development of its children, from babyhood to adolescence, into sturdy, useful citizens.

The first step will be, the selection, by a committee of experts, of the community in which the demonstration will be carried on over a period of five years. Geographical limitations are not imposed in the selection of the community but the Council believes that the following qualifications will insure those results that are of greatest benefit to the entire country:

The town or city should be located in a county of between 50,000 and 60,000 population. The population should be fairly stable.

The age distribution of the population should be fairly near to the average, especially as to the percentage of children and babies.

There should not be any strikingly predominant racial stocks.

The city or town should have a normal percentage of its population engaged in manufacturing.

There should be a variety of industries in the city.

The surrounding area should be agricultural territory.

The town should be in a birth registration state and should have fairly complete vital statistics.

The mortality of infants and children should not be strikingly abnormal. Health conditions should not be abnormally good or bad and health machinery, including state laws, local ordinances and personnel, should be equal to those of a community of similar size.

The committee, which will recommend the town to be chosen for the experiment, consists of Dr. Richard A. Bolt, of Baltimore, general director of the American Child Hygiene Association; Miss Ella Phillips Crandall, of New York, formerly director of the National Organization for Public Health Nursing; Dr. Charles J. Hatfield, New York, director, National Tuberculosis Association; Owen R. Lovejoy, New York, general director, National Child Labor Committee; Miss Sally Lucas Jean, of New York, director, Child Health Organization; Dr. Haven Emerson, former health commissioner of New York, and Dr. Donald B. Armstrong, Framingham, Mass.

The direction of this novel health ex-

periment will be under Clarence King, who is widely known in the field of research and the administration of health and social work. He holds degrees from the University of Wisconsin and Columbia University.

Member societies of the National Child Health Council are: The American Child Hygiene Association, American Red Cross, Child Health Organization of America, National Child Labor Committee, National Organization for Public Health Nursing, and the National Tuberculosis Association.

ANOTHER "IF"

(With Apologies to Kipling)

If you can keep your youth when folks about you
 Are growing old and finding pleasures few;
 If you can walk your miles, when friends ride past you,
 And make allowance for their riding, too;
 If you can work and not be tir'd by working,
 Or, playing, hold your own with other men,
 Or, being beaten, don't once stop the trying,
 And yet don't think you must retire at ten;
 If you can sleep eight hours with windows open
 And never mind the icy winds that blow,
 And exercise till all your pores are open
 And bathe and tow'l until your skin's aglow;
 If you will keep erect when you are walking
 And hold your chest up high and figure trim,
 And take the pose for which you have been striving
 And day by day attack your work with vim;
 If you can think and not make thought your master;
 If you can laugh and yet be serious, too;
 If you can banish worries and disaster,
 And make your friends think that your cares are few;
 If you can be a comrade to your children,
 And find your relaxation in their play,
 And learn again the faith of little children,
 Who live and love and grow strong day by day;

If gold is not your only way of judging Success or failure in your fellow-man,
 If you can see the good in men you're meeting,
 And serve them all in every way you can;
 You'll find the best in life and be surrounded With wisdom, health, and love, unto the end;
 Life will be joy and happiness unbounded,
 And, what is more, you'll be a Man, my friend.

—George T. Stafford.

POST-PARTUM ECLAMPSIA

After attending on a severe case in which I did not have time to get scared until on the road to safety, I was reading the reference to Dr. T. S. Farncomb's (Janu-

ary issue, p. 37) use of morphine and the advisability of not emptying the gravid uterus in eclamptic seizures. Mind you, I read this after my trouble and I agree with him as to not emptying the uterus when there is just an occasional fit. However, when the pregnant women are having "two-in-a-place", as they sometimes do, I think that we shall have to empty; at any rate, whatever we do must be radical, to say the least, even with medicinal treatment. As to morphine, I have always been afraid of it almost as much as I am of convulsions. Morphine is a narcotic poison and locks up secretion, deadens sensation and tends to do what we then have to undo; especially in this dreaded symptom—Eclampsia is a symptom *per se*, a nervous reflex. It is here that your morphine gets in its work and the large initial dose should suffice if you get busy.

By way of digression, I remember reading an article in the transaction of the Mississippi Valley Medical Association for 1913 or 14, if I remember correctly, asserting that Worms were the cause of eclampsia in the great majority of cases.

Now, to my little (?) case of eclampsia, attended March 8, 1921. I was called to a Negress, about 14 years old, at about 10:30 a. m. On arriving, I found that she had been confined the previous morning. About half an hour before I was called, she had a convulsion. As the Negroes gathered in, she had another and they scattered out, one of them coming for me. On the strength of the history, I got ready while he caught my horse, and on we went. When I entered, the patient was in the deep agonies of one of those fits which you never forget after having seen one. I watched it abate just a little; but, here it came again. So, I got busy and here is what I did in my simple way. I gave 15 minimis of Norwood's tincture of veratrum viride, hypodermically, washed my hands, went at that os and *unloaded* it of a lot of débris, or secundines, which the hare-lipped "granny" had failed to relieve or take away the day before. I sterilized my lance and proceeded to draw blood to relieve that high blood pressure, at once, without waiting for the effect of the veratrum. I abstracted half a pint or more of blood. Then I gave her, by enema, chloral hydrate and bromide of potassium, 1 to 2 in proportion, about 40 grains in all. All this was done in about

thirty minutes. She had another, lighter, convulsion; so, I gave her a weaker (half-strength) injection of hyoscine-morphine-cactin and left her for two hours.

On my return, I found that she had had no more convulsions; so, I gave her about 20 grains of calomel per os, ordered the chloral-bromide mixture continued, also 5 minimis of the veratrum tincture every three hours, with caution; further, 2 tablespoonfuls of epsom salts in five hours if purging had not commenced. The family gave the salts and repeated it. On my next visit, at noon the next day, I found the patient cleaned out, rational, hungry, and surprised at the story of happenings, as she knew nothing about it. She had regained consciousness about 1:30 that night, after the effect of the severe cathartic which acted only five times. You northern fellows would think it should still be acting, who do not know our southern conditions.

What was the whole trouble? Was it due to albuminuria? I never stopped to see. ELIMINATION, a complete emptying-out, cured her. The bleeding was to her what the "pop-off-valve" means to a steam engine when too much steam is ahead. O, yes, I sweated her and gave diuretics, too. *The Elimination Cured.* What did the unplugging of that os do? I use veratrum, elimination, and Harrower's glandular feeding beforehand, and let the baby alone. Harrower's idea is a rational one, sane, and does the work. Try it next time and be convinced.

A. L. NASON.

Darling, Miss.

MEDICAL NEWS

Walter B. Swift, A. B., S. B., M. D., a lecturer on speech development and correction, Northwestern University, (Summer 1921) has just finished a long course of instruction on Speech-defect-correction in the Fröbel League, New York City. There was a class of sixty-four students of Speech correction, who have already put Speech correction into New York schools and who will take the methods and systems of Doctor Swift into many cities of the country, beginning next fall.

The Healthsport Sanatorium.—We are informed that the Healthsport Sanatorium is being built at Riverview, near Jackson-

ville, Fla., and that it is proposed to make it the largest sanatorium in the world. It will have a total of 2,800 rooms covering over four thousand acres of land; it will maintain two eighteen-hole golf courses, one hundred tennis courts, and a one-mile race track. The total cost is calculated at about twenty million dollars.

This sanatorium is said to have been conceived by a coterie of northern physicians who send numerous patients to Florida for their health and recuperation.

Dr. C. C. Collins, of Jacksonville, is president of the Association; Dr. Theo G. Croft vice president and treasurer; Dr. R. M. Baker vice president and secretary. Those interested in the erection of the world's largest sanatorium and health resort believe that, thus, they have identified with them men whose names stand at the top of the medical profession both in Florida and the entire south, and whose association in this laudable work will mean its continued success when the sanatorium is in active operation.

The Mecca Hotel and Sanatorium Association is comprised of a number of capitalists and prominent physicians, both of Jacksonville and the east, and already one million has been subscribed toward the project, and valuable property totaling 510 acres near the city of Jacksonville has been secured. The tentative plans call for a building of crescent shape with 1,800 rooms and having four great wings, four stories high, and 400 feet long extending from the convex side, and so arranged that each room will be supplied with sunlight. There will be forty bungalows built facing a 100-foot boulevard, each completely furnished from linen to silverware; these bungalows will cost about \$20,000 each.

There will be four segregated hospitals, clubs, casinos, Y. M. C. A., churches, and so forth, and outdoor sports of every description will be provided. The plans call for a total of 4,000 acres of land with 5 miles of water front. The sanatorium will be owned, operated and controlled by American physicians and will be conducted

upon ethical lines. The correspondence division of the Mecca Hotel and Sanatorium Association is located at 501-503-505 Hill Building, Jacksonville, Fla.

"Healthsport" thus promises to be an unusually attractive place, especially for those who are sent to a mild climate for convalescence from serious illness or who are in need of modified rest—modified in the sense of freedom from business cares while the "rest" is tempered with suitable exercise.

The U. S. Public Health Service estimates that at least 500 and possibly 1,000 lepers are at large in the United States, and that the number is increasing. The government did not start work on its Federal Home for Lepers a minute too soon.

It took Ehrlich 606 experiments to discover a way to give a man arsenic enough to kill syphilis germs in his blood without running the risk of killing him. He called the result "606" or "salvarsan." In this country, the United States Government supervises its production through the Hygienic Laboratory of the Public Health Service and calls it arsphenamine.

The scratch of a lion's claw is almost as deadly as his bite, for, he never cleans his nails and always carries under them rotting meat that is rank with deadly germs. Flies and water bugs do the same thing on a smaller scale. "Don't forget," says the U. S. Public Health Service, "that they never wipe their feet."

The U. S. Public Health Service calls attention to the fact that only twenty-three states have efficient birth registration laws; eighteen have imperfect ones; and five have none at all. Inability to prove age causes all sorts of legal troubles in life—in proving citizenship, in voting, and in inheriting, for instance. Don't forget to make sure that the new arrival in your home has been registered.



Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR
Conducted by GEORGE BUTLER, A. M., M. D.

Food in Its Relation to Health

[Continued from May issue, p. 344.]

If the mucous membrane is weak, five hours should elapse between breakfast and luncheon, and between luncheon and dinner, or between dinner and supper. If you are stupefied by a meal, you have eaten too much or have eaten when you were not truly hungry. Idle people and children should take their substantial meal in the middle of the day; but, if hard work is to be resumed immediately after dinner, indigestion will be the result; in that case, eat at six o'clock when the day's work is over.

The daily food and drink of every person should be in accordance with the well-known principles of a healthful diet. The habit should be established, and never swerved from, of living properly, so that no one, as he takes his seat at the table and prepares to satisfy his appetite, need be distracted from the fulness of its enjoyment by any vexatious questions. He should not be forced to set up a debate in his own mind as to the digestibility of every bit of bread he breaks or of each plate of meat set before him. It matters not how wholesome may be the article of diet, no stomach will digest it easily if its operations are disturbed by distracting doubts of their efficacy. Physiology has a ready explanation of this undoubted fact. Mental anxiety of all kinds weakens the nervous power. While lowering the general tone of the body, it diminishes especially the power of digestion. The brain, moreover, is at the same time inordinately active, reserves the force of nervous energy and draws the blood to itself at the very moment the stomach chiefly requires its full supply of both. The easy unquestioning consumer of his food is the most likely to digest it well.

Under-Feeding

The majority of the world's inhabitants

are underfed. There are few, and these usually of the very poorest classes in civilized countries, who need to suffer from cold through lack of clothing; but food, on the contrary, is usually more or less difficult to get, and civilization is always expensive. Even when food is abundant, the quality may be so bad that those who subsist on it are poorly nourished. In this matter of diet, extremes meet—the savage goes hungry because he is too lazy to go after food or, perhaps, because it cannot be found; the wealthy and fashionable restrain their appetite because fashion, more tyrannical than hunger even—enjoins it; or because they are so absorbed in intellectual pursuits that the cry of the passions is not heard.

The bad consequences of defective nourishment are not confined in their operation to the bodily constitution of the laboring poor. Their minds also are deteriorated. The pressure of poverty is unfavorable to the growth of refinement and morality. Crime and turbulence are never so much to be dreaded as during times of scarcity, and of manufacturing and agricultural distress.

The Choice of Food

Among those subjects that relate immediately to health, there is no one more important, or less regarded by individuals, than their aliment. It is a mistaken notion that one person requires an animal diet, and another, whose avocation and habits are different, a vegetable regimen. Many of the diseases originating in "dyspepsia" are induced by a habit of living too exclusively upon a few articles of food most of which are of animal origin. Nature intended that man should subsist upon the variety of bounties with which she has so liberally replenished the earth, and his system is constituted in a manner suitable to partake, al-

most indiscriminately, of whatever is agreeable to his palate. The injurious effects of many articles of diet are to be attributed, not so much to their peculiar nature as to the refinements of cookery. Although roast-beef has become the magnum bonum of a good dinner, the too great freedom and frequency with which it is used already begins to affect the constitutions of the opulent.

Gout was once a stranger in New England, but the luxury of modern days is preparing the way for a train of constitutional irregularities which future generations can only regret, while they suffer its inflictions. To live long, live simply.

It is true that animal food contains a greater portion of nutriment, in a given quantity, than vegetables; in a proper state of preparation, it is almost adapted for the immediate action of the absorbents of the chylopoietic viscera. But, the digestive functions of the human system become prematurely exhausted by constant action, and the whole system eventually sinks under great or uninterrupted excitement. If plain animal food were taken but once a day, and men would substitute for the various ragouts, with which modern tables are so abundantly furnished, wholesome vegetables and pure water, we should see health walking in the paths that are now crowded with the bloated victims of voluptuous appetite. Millions of Gentoos have lived to an advanced age without having tasted of anything that ever possessed life, and they have been wholly free from a chain of maladies that have scourged every civilized nation on the globe. The wandering Arabs who have traversed the barren deserts of Sahara, subsisting on the scanty pittance of milk from the half-famished camel that carried them, have seen a hundred years roll around without a day of sickness.

The temperature of our food is an exceedingly important consideration. We are accustomed to take it too warm, forgetful of the fact that artificial heat destroys the muscular tone of the stomach, vitiates its secretions and its physical powers, and induces painful and dangerous diseases of the liver. Let us take, then, another hint from the children of nature who subsist on aliment of a temperature no higher than that of their own bodies, and who are generally hardy and long-lived until the simplicity of their habits is intercepted by the

adoption of the vices brought among them by the civilized invaders of their native forests.

The Kind of Diet

Low diet consists in such a reduced quantity of alimentary matter that the system, far from being sustained in a state approaching to plethora, is kept below the natural standard or even made to draw upon its own resources. A strict adherence to this form of diet is of the utmost importance in the treatment of diseases of an acute inflammatory character; it favors the return of health, which, by its assistance, finds the system in a state best adapted to appropriate with rapidity and advantage the more abundant nourishment that may then be supplied to it.

Poor diet relates rather to the quality than the quantity of food taken. Diet is poor when it consists of articles possessed of very little nutrient principle, and that little of the lowest kind. It may more especially be regarded as poor when these articles are out of condition and of inferior or bad quality; as, for example, when watery, ill-prepared potatoes, damaged grain, or a large proportion of succulent autumnal vegetables are to a great degree relied upon as sustenance.

Poor diet must be distinguished from simply low diet; although, like the latter, it powerfully tends to reduce and keep down the system. Instead of being, like it, conducive to health, it is a frightful and almost certain source of disease. It is often important to caution those whose health requires that they should be put upon low diet, regarding the danger of oppressing the stomach in respect to quantity, while paying scrupulous attention to avoiding a reduction in quality.

Full diet is meant when food of good and thoroughly nutritious character is supplied in quantity sufficient to satisfy the wants of the system completely. Its quality may be plain and simple, and it may possess no other stimulating property than that which wholesome, well-prepared food never fails to afford to the healthy stomach which is ready to receive it.

A diet is generous when the articles composing it are not merely rich in nutritive principles, but accompanied with those stimulants which dispose them to provoke the appetite, to call the powers of the stomach into activity, and, in some degree, hasten

the course of circulation; diet may, therefore, be generous without reference to its quantity. Full and generous diets are, consequently, no more to be confounded than low diet and poor diet.

Whether food is derived from animal or from vegetable sources, it always contains the same alimentary principles. All these products, whatever their origin, contribute in the same way to the support of our bodies. In a general way, foods of animal origin are richer in nitrogenous substances than vegetable foods, while the latter are richer in heat-producing elements.

Pure vegetarians live solely on vegetable diet and exclude meat altogether from their tables. Ordinary people, on the other hand, and especially those who live in towns, depend chiefly upon meat.

One of the main objections that vegetarians adduce to the use of meat is, that it often contains elements dangerous to health. Diseased meat is apt to infect the eater. Moreover, meat, even though healthy, becomes dangerous as food when it is decomposed. All that is perfectly true, and it is for that reason that, in all urban centers, inspectors are charged to examine attentively the quality of all meat exposed for sale.

However, vegetables are not without dangers of their own. Many are the cases of poisoning by mushrooms; rye, a most useful cereal, is poisonous when affected with ergot fungus; decomposing fruit or vegetables may cause intractable diarrhoea; and so on.

If the vegetarians are going to frame an indictment against meat, the eaters of meat can do the same, with equal chance of success, against vegetables. Here, as in many other cases, wisdom and truth lie midway between the two extreme opinions. Still, it is a very weak argument on the part of the meat eaters that man is intended to be omnivorous by reason of his dentition and the peculiar structure of his alimentary canal.

The accepted theory of evolution surely presupposes that the nature of the food determines the structure of the alimentary canal, and that the latter has been modified in accordance with the demands made on it through successive generations by the representatives of *Homo Sapiens*. "Animals" says Brillat-Savarin, "are limited in their taste; some live on vegetables alone; others eat nothing but flesh; others, again, subsist

solely on grains; none of them know anything of complex savours. Man, on the other hand, is omnivorous; all that is eatable is subject to his great appetite."

At the same time, it must be admitted that the teachings of the vegetarians have directed attention to the fact that people can do with much less animal food than they have been accustomed to, and that there is a right and wrong way of cooking vegetables. Meat is a long way from being absolutely necessary to human life, and people whose means do not permit of such luxuries as butchers' bills may, with advantage to health and pocket, go to the vegetarian and consider his ways, always bearing in mind that superior vegetables and fruits will do him far more good, at the same price, than inferior meat.

If we wished to limit the composition of our dietary exclusively to food necessary to the support of life, we should have to banish from our tables many accessories which have, nevertheless, become almost indispensable from the frequent use that we make of them, and also by reason of the services that they render us.

Let us compare the food of animals, of savage tribes, and of civilized nations. The animal eats only to supply its bodily needs. Man, even among the most savage races, is not content with so simple and rational a diet; he must have substances that enrich the flavor of his food and which excite his faculties. Civilized man is highest in the scale; his diet is the most complex; there enter into its composition not only the indispensable nutritious elements which form its basis, but also condiments, spices, aromatic substances, which tickle the palate and excite the appetite, and stimulants which are for him especially aids to work.

It would appear that this complexity of diet has a certain relationship to the functions of a being who makes use of it. The animal is limited to a purely physical life and uses food that is simply nutritious. Man lives, not only physically but also mentally. He is more complex and has more needs than the animal. No astonishment need, therefore, be felt that his dietary should be more complex and adapted to diverse needs. The more man advances in civilization, and his wants increase, the more complex becomes his food.

"Tell me what you eat, and I will tell you what you are". Such is one of the

aphorisms which Brillat-Savarin has given us in his "*Physiologie du gout*." In a general sense, it is perfectly correct.

Stimulants form a special class of alimentary substances, which do not by themselves possess nutritive qualities, or which, at any rate, possess them to a very limited degree, and whose special function, as their name indicates, is, to stimulate the organism. These substances act chiefly on the nervous system, which explains why they are of such great utility when they are employed judiciously and without abuse; whereas, when taken immoderately, they engender true diseases of which alcoholism is an unhappy and common example.

In every part of the globe, man, savage or civilized, seeks out substances that unsettle the nervous system. All nations, without exception, have employed every known agent to excite and, often, to extinguish the human intellect.

Stimulants must be divided into two very distinct classes. In the first of these classes, we include all those vegetable substances of which coffee and tea are the type. These substances owe their principal action to a special alkaloid—caffeine.

In the second class are placed the alcohols, liqueurs, and fermented drinks in which the active principle is alcohol.

These two kinds of stimulants do not act in the same way on the organism. Generally speaking, though, it may be said that the abuse of the first class is less serious and less common than the abuse of the second.

With regard to the substances belonging to the first group, the various vegetable products, that contain the same active principles which are closely related the one to the other, seem to have been revealed to man by a sort of instinct, for, their use is found in most countries. In Paraguay, mate is used; in Brazil, guarana; in Central America, cocoa; among the savages of North America, Apache tea, Oswego tea, and Labrador tea; in Sumatra, Abyssinia, and in the Soudan, decoctions of the coffee-plant leaves or other analogous plants; in

Equatorial Africa, kola-nut; and in Peru, coca.

The Nutritive Value of Vegetables

Physiologists are agreed that a vegetable diet is sufficient for the needs of the organism, even of carnivorous animals. The Hindu, whose principal means of sustenance is rice; the nomadic Arab or the porter of Smyrna, who live on dates; the Italian laborer, whose daily rations consist of "polenta" and macaroni, furnish ample proofs of this view. The animal nearest to man, the ape, is frugivorous. An important objection, however, to a strictly vegetarian diet is the excessive amount of carbon ingested daily and the disturbance of nutrition that is likely to follow. As a result of his studies on the nutritive value of vegetables from a hygienic point of view, Dr. Hildebrandt comes to the following conclusions:

1.—A vegetable diet supplies the organism with all the food necessary for the growth of the body and the normal working of its organs.

2.—A prolonged vegetable régime may give rise to gastrointestinal and general disorders.

3.—From an economic point of view, a mixed diet is to be preferred to an exclusively vegetable diet, for the reason that, while at the same cost vegetables generally contain a greater number of substances, the quantity of substances that can be utilized is smaller.

4.—It is not yet absolutely proven that vegetable albumen has the same value as animal albumen.

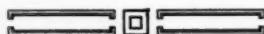
5.—It is a matter of practical knowledge that two-thirds of the albumen can be supplied by vegetables.

6.—The carbohydrates are almost entirely furnished by vegetables.

7.—Only one-half of the fat necessary for nutrition is supplied by vegetables.

8.—An obstacle to the unlimited use of vegetables is the high price of those that are regarded as luxuries.

(To be continued.)



Among the Books

DENNETT: "SIMPLIFIED INFANT FEEDING"

Simplified Infant Feeding. By Roger H. Dennett, B. S., M. D. Second Edition Revised and Enlarged. 385 pp. Illustrated. Philadelphia and London: J. B. Lippincott Company. 1920. Price \$4.00 net.

The title of this book should have the first word heavily underscored. "Simplified" is just what it is. Some years ago, a student coming from a lecture on pediatrics was overheard to remark about his professor: "I wish he would stop talking on calories, and tell us just how to feed a baby". There is a general feeling that we have been pretty well fed up on calories. This book contains a minimum of theory but abounds in nuggets of wisdom. It gives very definite and practical instruction on just how to prepare an infant's food under varying conditions; making use of some eighty illustrative cases. Hence, it is especially suited for the inexperienced. As the author says in his preface: "It was written to help the general practitioner, particularly the postgraduate student, to successfully feed his babies as they occur in his practice."

The chapters on Diarrhea are of particular interest. Some experienced physicians use more drug therapy in the treatment of this condition than the author approves of; and, of course, it is universally recognized that the treatment should be mainly dietetic. A generation ago, there was altogether too much dependence upon drugs, while perhaps, today, the tendency is to go to the other extreme. While we should make our treatment mainly dietetic, it would be a distinct loss to deprive ourselves of the services of bismuth, for instance, in a certain class of cases.

The chapter on "Dry Milk" should be widely read. The value of this preparation is not as well known as it ought to be. The author says: "It is usually wise to turn to the use of dry milk as soon as it is found that the individual infant does not

prosper upon ordinary milk mixtures of fresh liquid milk."

A valuable book for the busy family doctor.

PARIS MEDICAL, FOOD NUMBER

Paris Médical, for April 2, is devoted to diseases of the digestive organs. The annual review is prepared by Doctor Harvier. Doctor Regaud writes on cancer of the tongue; Doctor Schwartz on the surgical treatment of cancer of the colon. Doctor Paisseau deals with nonsuppurating hepatitis of ameba origin. An article by Doctor Pauchet is entitled, Diagnosis and Treatment of Iliac Volvulus. An article by Dr. Paul Carnot is on the subject of prandial defecation, its significance and its mechanism. While feces are discharged while eating, especially in infants, the same thing occurs in some adults, more particularly in some disease-conditions. These are discussed interestingly in this article.

Paris Médical is a splendid weekly journal, edited by Prof. A. Gilbert, and published by J. B. Baillière & Fils, 19, Rue Hautefeuille, Paris, France, the subscription price for foreign countries being 35 francs (normally, \$7.00).

McCANN: "EATING"

The Science of Eating. By Alfred A. McCann. A New and Enlarged Edition of "This Famishing World." New York: George H. Doran Company. 1920. 408 pp. Price \$2.50.

There is probably no subject before the medical profession today of such vital importance to everybody as the question of diet. Of all the scientific discoveries of late years in regard to diet, by far the most important is that of the vitamines and the part they play in nutrition. We are gradually waking up to the fact that the food, upon which we are depending to nourish our bodies, is not as well adapted to that purpose as it should be, and, as a

consequence, the health of the people is suffering. Much of our food is adulterated by substitution, much of it has been robbed of its most valuable constituents, much of it contains chemical preservatives injurious to health; and the most serious feature of the matter is, that the public is not awake to the danger.

Some of the people do not concern themselves about the matter at all; others have been led to believe false statements issued by the food manufacturers to increase their profits; others allow vanity instead of common sense to influence them in buying food pleasing to the eye, without reference to its wholesomeness. Housewives take pride in the whitest of white bread, regardless of the fact that that means bread made almost wholly of starch to the exclusion of the mineral salts and other vitamins needed by the body. The conviction has been growing in the minds of scientific men of all classes that the increase in frequency of certain diseases, such as, cancer, tuberculosis, heart disease, kidney disease, neuritis, and others, and the high death rate among children, are caused largely by unsuitable food—food that fails to supply the body needs and throws too much work upon the organs of excretion.

This book is a trumpet call designed to arouse the public from its lethargy and indifference. It would be well if it could be read by every adult in America. We may not agree with the author in every detail; the facts that he presents, irrespective of his conclusions, are grave enough to give us pause and set us thinking. When U. S. Government reports show that nearly 400,000 children are dying every year from preventable diseases, that 40,000 children have organic heart disease, that 4 million children are suffering from malnutrition, that 10 million children have defective teeth, that, of our young men in their twenties nearly one-third are unfit for military service because of physical defects, we have abundant ground for doubting that our people are fed as they should be. When we consider with an unprejudiced mind the lessons taught by the experience of the 500 sailors of the "Kronprinz Wilhelm," by that of the Madeira-Mamore poison squad, the Mississippi Penitentiary poison squad and the Billibid Prison poison squad, it is difficult to avoid

the conclusion that our ideas of a properly balanced diet needs revising.

Mr. McCann's book is written in a bright, forcible, and readable style, and the reader who begins it is likely to be so absorbed in its remarkable revelations that his interest is held to the last page. It is not a book of mere assertions; there is abundant proof of the facts laid down. The reader is invited to reflect on their significance.

To review this book adequately would take far more space than can be given in this department. The reader is referred to an article on this subject in another part of this issue, p. 369, of CLINICAL MEDICINE by Dr. Rittenhouse whose enthusiasm on this subject is known to our readers from previous articles, particularly those in November and December of 1919.

MAGLIONI: "THIRTY-SEVEN DAYS OF FASTING"

Mis Treinta Y Siete Dias De Ayuno. (Auto-Experiencia) A propósito de Los Casos de Mr. Mac Sweeney y de sus 11 Compañeros, Ayunadores Políticos en las prisiones de Brixton y de Cork. "Huelga Del Hambre." Por Dr. Luis C. Maglioni. Ex-Cirujano del Hospicio de las Mercedes, Ex-Asistente, durante ocho años, á las Clínicas de Paris, Zurich, Berlin y Londres. Buenos Aires: Imprenta San Martín. 1920.

This little pamphlet of forty-eight pages was evidently inspired by the experience of the late Mr. MacSweeney, former mayor of Cork, who succumbed after a prolonged hunger strike in Brixton Prison, and also of eleven compatriots of his who likewise subjected themselves to a hunger strike.

Doctor Maglioni relates several personal experiences during which he fasted for shorter or longer periods, the first one being in 1911, at Berlin, after he had studied an article on fasting written by Dr. Gustav Riedlin; the last one being extended to thirty-seven days, in 1915. These fasting cures were undertaken in the effort to overcome symptoms of intestinal disturbance from which he suffered and which suggested very strongly duodenal ulcer. After the last long fast of thirty-seven days, the author relates, all symptoms of this nature disappeared completely and without returning at any time. He does not claim that this recovery is to be at-

tributed exclusively to the fasting but leaves the question open. The careful record of his subjective and objective symptoms is unusually interesting.

The author closes his discussion by asking two questions; namely:

1. Is it possible to fast for a prolonged period, that is to say, is it compatible with continued life?

2. If it is possible, may prolonged fasting serve in any way as a therapeutic agent?

The author believes that both questions should be answered affirmatively.

MORELLI: "WOUNDS OF LUNG AND PLEURA"

The Treatment of Wounds of Lung and Pleura. Based on a Study of the Mechanics and Physiology of the Thorax. Artificial Pneumothorax—Thoracentesis—Treatment of Empyema. By Professor Eugenio Morelli. Translated from the Italian by Lincoln Davis and Frederick C. Irving. Boston: W. M. Leonard, Publisher. 1920. Price \$5.00.

While Forlanini, the teacher of Morelli, originally proposed the induction of artificial pneumothorax deliberately for the treatment of pulmonary phthisis, that is to say, for the immobilization of the diseased lung, a secondary use followed logically, namely, the application of the method in the treatment of abscess of the lung and bronchiectasis. A third use of artificial pneumothorax was proposed by Forlanini himself for the treatment of pleural effusions, while a fourth was developed through the observation that patients treated by pneumothorax ceased to have hemoptysis when the pneumothorax was properly induced and the lung really immobilized. Thus, recourse was had to pneumothorax as a direct remedy for bronchopulmonary hemorrhage of whatever nature and form.

Professor Morelli elaborated and successfully applied a fifth form of therapeutic pneumothorax, namely, a method with special indication and special technic adapted to the treatment of war wounds of the lung and of their pleural complications and sequelae. It is this method that forms the subject of the volume before us. Morelli's method was applied successfully during the war and, naturally, will find

application in peace time in those industrial and other injuries in which the chest organs are affected. To the surgeon, Morelli's book presents a valuable guide for the greater understanding and also for the application of the method.

A few remarks may be permitted to the Reviewer. In the introduction to this book, written by the late Professor Forlanini himself, he says that he proposed the treatment of pulmonary phthisis by the induction of artificial pneumothorax in 1882. Morrow ("Diagnostic and Therapeutic Technic," third edition, 1921, p. 270), places the date of Forlanini's method at 1894—in common with other authors. To the historian, this point will be of interest. Moreover, on the first page of Forlanini's introduction (p. viii), the translators say: "It should be borne in mind that Forlanini's method antedated by several years Koch's momentous discovery of the tubercle bacillus." As a matter of fact, Koch's discovery, it will be remembered, was announced to the Berlin Physiologic Society in the last days of March, 1882.

The translators have retained the Italian term "Maestro," usually in quotation marks. It may be submitted that this use of the term does not read well in English, since it is employed commonly when speaking of artists, musicians, sculptors, painters, and so forth. The English "master," or "teacher" would have given a smoother reading.

All this, however, does not in the least detract from the value of the book itself but may be taken simply as dictated by the crabbiness of the Reviewer who is a stickler for form.

MORSE: "DISEASES OF CHILDREN"

Diseases of Children. Presented in Two Hundred Case Histories of Actual Patients Selected to Illustrate the Diagnosis, Prognosis and Treatment of the Diseases of Infancy and Childhood, With an Introductory Section on the Normal Development and Physical Examination of Infants and Children. By John Lovett Morse, A. M., M. D. Third Edition. Boston, W. M. Leonard. 1920. Price \$7.50.

This is a well-known member of the "Case History" family, being, in fact, the second volume that made use of this form of teaching. It will be remembered that the Case History series originated in Bos-

ton. Unless the Reviewer is greatly mistaken, it was Dr. Richard Cabot who made use of it, as the first, in one of his books. This method is far superior to the ordinary textbook style in that it discusses problems as they confront the practitioner, in the form of concrete examples of definite cases which the author investigates in the same manner in which the physician should investigate his patients. The various possibilities of diagnosis, as based upon the findings (history and physical examination), are discussed and conclusions as to diagnosis drawn. Thereupon, naturally, prognosis and treatment follow logically.

It may be said that Doctor Morse stresses particularly his discussions of physical examination and diagnosis, his advice as to treatment being usually condensed in one or a few brief paragraphs. Nevertheless, even these brief therapeutic suggestions are highly acceptable and instructive.

Morse's "Diseases of Children" is one of those books that "no physician can afford to do without."

"HARROWER'S MONOGRAPHS"

Harrower's Monographs on the Internal Secretions. Edited by Henry R. Harrower, M. D., Glendale, California, and published quarterly. Price per copy \$1.50, and with subscription \$3.00 in advance.

Vol. 1, No. 1, January, 1921. Hyperthyroidism: Medical Aspects.

The first issue of "Harrower's Monographs on the Internal Secretions," which have been announced during the last few months, is before us. It deals with hyperthyroidism from the viewpoint of the internist. The conclusion seems unavoidable that surgery has not produced sufficiently good results in conditions due to hyperthyroidism, more especially in exophthalmic goiter, to justify the assertion advanced by many surgeons that this affection is essentially a surgical one. Even the medical treatment has not been successful enough to justify any great enthusiasm, and Harrower does not think that the prognosis of manifest hyperthyroidism, either from the surgical, the medical, or the organo-therapeutic standpoint is very good. However, while some progress has been made in the study of the condition under consideration, much more remains to be accomplished, and we receive the impression from a perusal of

the monograph that the problem is not quite hopeless after all but that, with time and persistent effort, something more tangible may be discovered.

At any rate, Doctor Harrower deserves our thanks for having collected the most important information concerning hyperthyroidism in this handy pamphlet of 120 pages. It promises well for the other issues of the series which, the Reviewer is convinced, will be of great service to practitioners.

"THE OXFORD MEDICINE"

The Oxford Medicine. By Various Authors. Edited by Henry A. Christian, A.M., MD., and Sir James Mackenzie, M.D., F.R.C.P., etc. In six volumes. Illustrated. Volume III. Diseases of the Digestive System, Kidneys, and Ductless Glands. Oxford University Press. New York. 1921. Price \$52.50 for the six volumes.

The first two volumes of this beautiful system of the practice of medicine were reviewed in the December (1920) issue of CLINICAL MEDICINE. The present, third, volume follows its predecessors worthily. Its contents are enumerated in the opening paragraph of this announcement. It need only be added that an investment in this work will pay manifold interest.

MORROW: "DIAGNOSTIC AND THERAPEUTIC TECHNIC"

Diagnostic and Therapeutic Technic. A Manual of Practical Procedures Employed in Diagnosis and Treatment. By Albert S. Morrow, A. B., M. D. Third Edition, Entirely Reset. Illustrated. Philadelphia and London: W. B. Saunders Company. 1921. Price \$8.00.

A new edition of Morrow's "Technic" can but be greeted with acclaim. The book has well established its *raison d'être*, being entirely *sui generis*. It supplements ordinary textbooks that simply speak of the employment of certain diagnostic or therapeutic methods (for instance, sphygmomanometry, aspiration of fluids, exploratory punctures, and so forth) but without describing these methods in detail and without giving any special technic. Morrow's book makes good all these omissions. It is of service not only to the surgeon but

fully as much, if not more, to the internist by giving him details for the execution of many diagnostic methods to which he needs to resort frequently in the course of practice.

Some of the subjects treated are: The Administration of General Anesthesia, Local Anesthesia, Sphygmomanometry, Transfusion of Blood, Infusions of Physiological Salt Solution, Acupuncture, Venesection, Scarification, Subcutaneous Drainage of Edema, Cupping, Leeching, Hypodermic and Intramuscular Injection of Drugs, Administration of Arsphenamin and Neoarsphenamin, Administration of Diphtheria Antitoxin, Vaccination, The Treatment of Neuralgia by Injections, And many others.

BOOTHBY-SANDIFORD: "BASAL METABOLIC RATE DETERMINATIONS"

Laboratory Manual of the Technic of Basal Metabolic Rate Determinations. By Walter M. Boothby, A.M., M.D. and Irene Sandiford, Ph. D. Illustrated. Philadelphia and London. W. B. Saunders Company. 1920. Price \$5.00.

Lusk says: "In each mammal there is a basal metabolism." By this term is meant, the mineral heat production of an organism measured from twelve to eighteen hours after the ingestion of food, and with the organism at complete muscular rest. This mineral heat production may be measured in three ways: (1) by actual measurement by means of a calorimeter; (2) indirectly by calculating the heat production from an analysis of the end products which result from oxidation within the organism; and (3) specifically from the amount of oxygen used, and the corresponding amount of carbon dioxid produced, together with the total amount of nitrogen eliminated in the urine.

This book is a laboratory manual describing the technic for obtaining accurate measurement of this mineral heat production.

In certain disorders, determination of the basal metabolic rate becomes a valuable aid in diagnosis and treatment. This is particularly true of such diseases as diabetes and thyroid disorders, where it throws light upon what is really going on within the organism, and affords a basis tuberculosis. Dr. Stephen Paget on vacci-

of comparison for measuring improvement or the opposite.

INTERNATIONAL JOURNAL OF PUBLIC HEALTH

The *International Journal of Public Health*, which is now in its second volume, is published by the Department of Medical Information, a part of the general medical department of the League of Red Cross Societies, with headquarters in Geneva, Switzerland.

The journal is issued every two months and appears in four editions, English, French, Italian and Spanish, each containing the same material. The subscription rate is \$5.00 (20 shillings) per annum.

The Department of Medical Information of the League of Red Cross Societies, in addition to publishing this journal, also is ready to furnish information on questions relating to public health, hygiene, and preventive medicine, as well as on various other topics of general interest.

The first number of Volume 2 (Jan.-Feb., 1921) contains an article by Prof. Francesco Valagussa, of Rome, Italy, entitled "The Influence of Post-War Conditions on the Feeding of Children." Dr. Harold Westergaard, of Copenhagen, writes on "Public Health Before and After the War." Prof. Charles W. Eliot, President Emeritus of Harvard University, deals with "Present and Future Social Hygiene in America." Dr. E. Leredde, of Paris, describes "The Organization of the Campaign Against Syphilis in France." Prof. K. Shiga, of Tokio, contributes an article on "Early Treatment and Protective Inoculation in Tuberculosis." Finally, Miss Florence Swift Wright, Chairman Industrial Nursing Section, National Organization for Public Health Nursing, U. S. A., traces the "Development and Present Scope of Industrial Nursing in the United States."

In addition to these original articles, there are reviews and abstracts from literature, demographical notes, and various other matters of interest.

The articles to be published in forthcoming numbers of this journal offer much interesting and important information. There is an article by Dr. Armand-Delille on the Oeuvre Grancher: its rôle in the fight against tuberculosis. Dr. R. Burnand, of Leysin, Switzerland, on the treatment of

nation and antivaccination in England. Dr. Arthur Vernes, on the protection of the public against syphilis, and many other communications.

STONE: "WOMAN OF THE STREETS"

The Woman of the Streets. By Lee Alexander Stone, M. D. Burton Publishing Company, Kansas City, Mo.: 1919. Price \$1.50.

"Unless sanitarians and moralists get together and agree on some plan for handling prostitutes, other than the one of persecution and prosecution of today, future races will have so degenerated in one hundred years from the effects of venereal diseases that nothing can be done for their regeneration. . . . Sentimentalism should not be allowed to control the sober judgment of physicians and laymen and they should unite to overcome a disease that is sapping at the very vitals of present-day civilization. . . . It is impossible to legislate as old a profession as that of prostitution out of existence. The causes for it must be found out and eliminated; until this is done, every move leading towards doing away with the social evil must be a failure."

So far, so good. However, the Reviewer considers it as somewhat far-fetched to explain the difficulty of the problem of the prostitute by its ancient origin; there are better and more correct explanations. True, among many ancient peoples, virgins were required to "prostitute" themselves, at least once, as a manifestation of devotion to the deity. As Stone explains, this custom was not only a religious one; it was much more a patriotic measure originating in the necessity of infusing new blood, from strangers, into a nation which was suffering from inbreeding; since the men were not permitted to marry outside of their tribe. Indeed, the sacrifice of virtue to the goddess Mylitta was not in any sense a sensual or lewd custom. It was due to a desire to progress. Prostitution as an original sacred institution stood foremost as being of service to mankind.

It would be well, it seems to us, if another, less objectionable term could be found for that religious custom which, la-

ter, degenerated into hospitable complaisance and, still later, into mercenary graft and vice.

However, the woman of the street of today is far removed from her sister who offered herself at the altar of her gods. She is vastly different even from the *hetairæ* of the Greeks and from the courtesans of the Roman Republic; although those of the Roman Empire may have had little the better of her.

The woman of the street of today is clearly the product of our modern civilization, or the want of it. Far from being a "comrade" ("hetairæ", concubine), she is the purveyor to man's ungoverned passion, to his desire to kick over the traces, to "have a good time" (so called). Incidentally only, her traffic is engaged in for the purpose of gaining easy money. All this, though, assumes a very serious aspect when it is considered that the woman of the street is the carrier of the most pernicious and evil habits and diseases; both being communicated by her men customers; and that it is she who threatens to destroy not only the sanctity of the home and the family, but the chances of human society for increasingly better health, physical, moral and mental.

Doctor Stone's book is characterized by common sense and fairness. It goes to the bottom of the problem and does not hesitate to call a spade a spade. The author does not mince matters but places the blame where it belongs: with the men themselves without whose connivance and initiative "fallen women" would not exist. They are fallen; but, it is the men who have pushed them down.

In any attempt to solve this problem which, it seems to us, is the most vital, the most important one confronting mankind today, the question of morality can enter only in part; a subordinate part at that. The most serious role of this carrier of disease and vice, the woman of the street, is her disastrous influence upon public and individual health; her pernicious action upon wholesome mental and intellectual progress; the terrible manner in which she revenges herself on men for the wrong they have done her.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

In answer to Query 6544, "Chloasma": "If that were my case, I should use: pyrogallol, grs. 10; sulph. precip., grs. 30; zinc oxide, dr. 1; aqua camph., fl.-drs. 2; liq. calcis, fl.-drs. 3; and lanum, drs. 3; mix. Apply after cleansing parts.

Also: tannoform, drs. 3; resorcin, drs. 2; alcohol, ozs. 4; aqua, ozs. 4; and ol. lavender, gtt. 10. Use as hair wash night and morning."

W. S.

—, Va.

Queries

QUERY 6567.—"Seborrhea of Scalp?" J. C., Kansas, reports the case of a woman, single, twenty-two years old. Had all diseases of childhood except diphtheria and scarlet fever. "Trouble began when about eight years of age. She has a 'weak stomach'; bowels always regular. Complains some of her back and thinks her kidneys are weak. (Had no opportunity to examine urine.) Often feels feverish. Has sick headache about every six weeks. Discharge from ear; better at times, worse in bad weather. Teeth good. Tonsils gone. Has acne on arms and back; chronic; few spots on face. Had smallpox two years ago and thinks her trouble was aggravated by the attack. Symptoms: itching scalp; hair dead; no luster to hair; falling out and quite thin on top; comes out in rows. Hair breaks, splits; the scalp has patches of dry, dirty yellow scales; small, very hard to remove. Family history is good; no cancer, tuberculosis or syphilis.

"I am not familiar with many skin diseases of scalp affections, so, this description perhaps is not clear.

"Have used a 25-percent solution of ichthylol in glycerin for about four weeks, applied to the spots every four or five days. This stops the intense itching."

We regret that you did not send scrap-

ings from the scalp of this patient and specimen of urine for examination.

You say that she often "feels feverish," but do not give us any idea as to whether there is any definite elevation of temperature at such time. You also state that "discharge from ear is better at times, worse in bad weather." We take it, therefore, that this patient has a chronic otitis media and, naturally, as long as this condition persists, headache, fever, etc., are apt to be present.

The general picture leads us to believe that the patient suffers from a chronic staphylococcal infection and, were we in your place, we would be very much inclined to administer the appropriate stock or, better still, an autogenous bacterin.

You might with advantage cleanse the scalp very thoroughly with a neutral sodium, or similar soap, then rinse carefully with plain warm water; dry; have the patient rub in chlorazene surgical cream. This procedure should be repeated every second or third night.

After conditions have materially improved, the growth of hair might be stimulated and the circulation of the scalp improved by the use of some such formula as: tr. cantharides, dr. 1; tr. capsicum, mins. 20; castor oil, oz. 1; alcohol to make ozs. 4.

This is rubbed lightly into the scalp with a small pledget of cotton. If, for any reason, castor oil is objectionable, bayrum may be substituted for it and the alcohol; however, the castor oil is a most desirable ingredient.

We believe that, after thorough elimination has been secured and digestion improved by the administration of some such combination as: papain, gr. 1, pepsin, gr. 1, berberine, gr. 1-32, extract gentian, gr. 1, fifteen minutes before meals, or pancreo-papain compound, one an hour after eating, —marked benefit will follow the use of yeast, one-half to one cake being taken with meals. Failing this, you might administer nucleinated phosphates, two or even three tablets three times daily between meals, and arsenous sulphide, gr. 1-64, immediately after eating.

By all means, endeavor to overcome the aural condition, even if you have to refer the patient to an otologist.

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QUERY 6568.—“Puerperal Eclampsia.” G. M. M., South Dakota, reports a case of eclampsia in a primipara, twenty-nine years old; weight 165 pounds. “Labor pains weak and made little progress. Complained of headache and defective vision. Suddenly the orbicularis-palpebrarum and orbicularis-oris muscles begin twitching; eyeballs set. Tongue between the teeth; cyanosis; terrible distortion and violent convulsion set in. I decided that time of action had arrived. Administered immediately: hypodermically, morphine, gr. 1-2, atropine, gr. 1-75. Second attack came in an hour. I again injected morphine, gr. 1-2, atropine, gr. 1-75. Third recurrence in an hour; morphine, gr. 1-4, atropine, gr. 1-150. Child high, os and cervix well dilated, presentation normal. Administered one mil of pituitrin. After some action of pituitrin, anesthesia by chloroform was induced. Applied powerful traction forceps and delivered ten-pound female child. Revived. Three recurrences of convulsions after the birth of the child and of undiminished severity. These three attacks averaged four hours apart; tension and pulse high. During the first and second attack, administered veratrine hydrochloride, gr. 1-64. This reduced the heart action from 130 to 65; possibly, if veratrine had been used before birth, recurrence would have been modified. The patient was comatose for forty-eight hours. Psychical disturbance

terminated spontaneously. No postpartum hemorrhage. No puerperal inflammation. Urine loaded with albumin. No trace of albumin after three days. Mother sitting up the eleventh day.

“In a sthenic case of eclampsia, where there is no uterine hemorrhage, will bleeding increase the patient's prospect of recovery? Should women who have gone through a siege of eclampsia be advised to have an abortion at six weeks in case of labor frequency? No doubt, in some cases, this would be a blessing.

“After treatment: Elimination. Saline enema and two ounces of castor oil. While she was comatose, she was catheterized.

“What can the cause be that plunges a woman into violent convulsions? Is the irritation due to uremia or to pressure? These cases surprise a doctor. Hope I shall never meet another.”

In the first place, it must be borne in mind that this woman is at just the age when such conditions are most apt to present. Moreover, she was decidedly of a full habit, her weight, as we understand it, being 165 pounds.

In this case, no examination of the urine seems to have been made during the last weeks of pregnancy and, unquestionably, the headache and visionary disturbance of which she complained, shortly before the twitching of the face and cyanosis were observed, had been present earlier.

It is, of course, impossible in the scope of an ordinary communication to discuss eclampsia and its probable causes in detail. As you are aware, there is a decided diversity of opinion as to whether or not the convulsive seizures are due to an intoxication of the blood. This theory, while generally believed and indeed plausible, has not been definitely proven. Were it so, one could speak of a nephritic toxemia, hepatic toxemia, cerebral toxemia, etc., the term depending upon which organ was most affected by the circulating poison, or which symptoms dominated the clinical picture.

DeLee states that the kidney of pregnancy is generally held to be due to a pre-eclampsic toxemia of a mild degree, the nephritis of pregnancy being the next step in the degeneration to the real nephritic form of eclampsia. The liver, he goes on to state, is always involved, either primarily or secondarily, and some cases seem

to be due entirely to hepatic insufficiency, the renal changes being secondary.

The eclamptic attack may occur without warning, but this is seldom the case. Such symptoms as headaches, twitching of the muscles, tendency to nervous excitation, nausea, vomiting, pain in the epigastrium, etc., with disturbances of the special senses being premonitory signs.

The attack, as described by you, is virtually typical. It is unfortunate, in this writer's opinion, that at this stage you administered morphine. In our estimation, morphine increases coma and, unquestionably, very many children die from morphine poisoning.

Thorough elimination, the administration of veratrum and delivery at the earliest possible moment is probably the wisest procedure, under such circumstances, especially when labor has commenced.

Naturally, as we do not know the cause of eclampsia, all treatment is empiric, and more can be accomplished by prevention than by treatment, for the simple reason that, after convulsions have set in, the nervous balance is overthrown. It may be taken for granted that the pregnancy favors the development of eclampsia and, if we can not prevent the latter, we can terminate the pregnancy. If the early stages of the impending catastrophe are recognized, emptying the uterus will invariably prevent a fatal issue. The method of effecting delivery, naturally depends on the period of pregnancy, the environment of the patient, the state of the cervix and the skill of the operator. After the date of infant viability, one must try, of course, to save the baby as well as the mother.

Where the cervix is dilated, delivery is accomplished at once by forceps if the head is engaged; by version and immediate extraction, if the head is above the brim. The pains in eclampsia are usually remarkably strong and rapidly efface and dilate the cervix; indeed, the doctor is sometimes surprised to find the child delivered under the cover.

Experience is accumulating to prove that rapid emptying of the uterus in deep narcosis gives the best results. There is little question that the convulsions cease or become less severe after delivery. Naturally, however, even when the child has been born, treatment must be continued and the patient very carefully watched, as the con-

vulsions are apt to reappear any time during the first week, or signs of puerperal insanity may make their appearance.

Venesection, of course, is one of the oldest remedies for eclampsia, but, with the advent of chloroform, it was relegated to oblivion. Since, however, the use of chloroform, chloral and other narcotics has come into disfavor, venesection is being again employed and will probably hold a permanent, though secondary, place in treatment. It is indicated where the convulsions occur frequently, the pulse is full and strong, and the face flushed or cyanotic; in short, in sthenic cases, bleeding will do good while in cases of the opposite type it is of doubtful utility, stimulation here being more desirable.

Ether, as an anesthetic, proves preferable to chloroform, the latter agent causing many deaths by degenerating the liver, the blood and the heart muscle (secondary chloroform death). Lumbar anesthesia has been tried but failed. Modern obstetricians are agreed that anesthetics and narcotics must be used as sparingly as possible.

You will find the toxemias of pregnancy very fully discussed in DeLee's "Principles and Practice of Obstetrics."

We congratulate you on the satisfactory termination of the case under discussion.

QUERY 6569.—"Can the Ethiopian.....," M. G. R., Canada, comes to us for information. "Usually," he says, "the doctor is expected to know all that there is to know about treating human ills, but, often, he is put to his wits' end for the time; at least, he is apt to be when required to change the physical appearance of a mulatto to that of a white person. This is just one of the latest that I have stumbled up against. This person, a pretty dark woman of forty-two, intelligent, and doing quite a successful business (electric baths, massage), is now anxious to become white. She is willing to pay well for the work. My disposition is, never to turn down any work that can be accomplished by the exercise of good ordinary commonsense, together with practical experience.

"I have 'Plastic and Cosmetic Surgery,' by Frederick S. Kolle, M. D., the 1911 issue. On pages 488 and 489, this author suggests the peeling of the skin for the

removal of smallpox pits and other blemishes.

"I have also 'The Skin; Its Care and Treatment,' by Emily Lloyd, and, on page 230, mention is made of a peeling process for removing freckles. In an old issue of 'My Lady Beautiful' (a monthly magazine), Dr. G. Alexander Ward has an article on how to correct disfigurements and to improve the appearance, and he advocates the 'deep peeling process' as the only permanent method for the removal of freckles, wrinkles, old age marks, face lines, and such, and to give a beautiful new skin, the time of seclusion being usually two weeks. This method, I believe, will do the work splendidly for the white person. Will it work on the negro with success? I have been reading up on the skin in Stelwagon, and in Gray's 'Anatomy,' and it rather looks to me that a deep peeling process should remove the pigmented layer of the negro in the same manner that it will on the white. Chicago, with its large population, will no doubt be in touch with anything in this line that has yet been thought of or used.

"Let me know if this 'peeling process' will permanently whiten (state to what degree) and improve the appearance of the negro."

You certainly are tackling a difficult problem when you see to make the blackamoor white. Since the days of Othello, such attempts have been made and, to the best of our knowledge and belief, have signally failed.

The "Good Book," so frequently quoted by people who desire to camouflage their undertakings, says: "Can the leopard change his spots, or the Ethiopian his skin?" and, while we may, by careful breeding, produce a striped or unicoloored leopard or even a "ginger-cake nigger", in the course of years, we are apt, in the fifth or sixth generation, to have a reversion to type, as several unfortunate individuals in these United States can testify, they having married presumably white girls who nevertheless have presented them with negro offspring.

You state that you have Stelwagon's "Diseases of the Skin," and Gray's "Anatomy." It should, therefore, not be difficult for you to understand that no "peeling process" which might safely be instituted could possibly make a white person out of

a mulatto. Negroes they are and Negroes they shall remain.

However, if you really feel like experimenting upon the "pretty dark," forty-two year-old mulatto, you might try one of these two exfoliating pastes: (a) resorcinol, 40.0, zinc oxide, 10.0, kaolin, 5.0, benzated lard, 25.0; or (b) resorcinol, 20.0 to 30.0, potash soap and sulphur, aa. 20.0; spts. lavandulae, 30.0 to 40.0. Bear in mind, however, that the most energetic exfoliating treatment can exert only a temporary effect. Creams, pastes and salves, containing sufficiently strong proportions of hydrogen peroxide, acetic acid, mercurial salts, or sulphur and naphthol, have been applied in an attempt to bleach the skin of the African. None of them, however, prove effective and we doubt whether, in the whole country, there exists today, an individual of African extraction whose complexion has been satisfactorily lightened a single shade by treatment.

A word of caution will not come amiss. The deep-peeling process might cause rather serious cosmetic disfigurement, if slow-healing ulceration is produced. That can easily happen if the wound left after peeling becomes infected. It will be well to place the entire responsibility for the outcome upon the lady of color, herself, having her sign a release that will protect you in case the result of the cosmetic treatment is unsatisfactory.

QUERY 6570.—"Carbuncles." W. E. B., Kentucky, desires "the latest on carbuncles, their cause, prevention and treatment."

As you are aware, the etiology of a carbuncle is practically the same as that of a furuncle—ill health from any cause, a depression of the vital forces, diabetes and other constitutional disorders predisposing. Added to such factors, of course, is the essential one of microbial invasion, the organism nearly always being the staphylococcus pyogenes aureus, although it is possible that other pus-organisms may at times be etiologic. There may be an invasion at many points, which results in the production of a lesion seemingly made up of a number of necrotic centers.

Carbuncle differs from furuncle by its flatness, the more extensive area involved, the multiple points of necrosis, and by the constitutional disturbances, which nearly al-

ways are present. A carbuncle about the face or head is a serious malady, being not infrequently fatal in old people and those debilitated by disease. Septic poisoning is always a possibility and death from thrombosis or from embolus has also occurred.

Naturally, the treatment of carbuncle is usually surgical, although abortive treatment may be tried. Excellent results, in the very early stages, have followed the application of chlorazene surgical cream. Many practitioners recommend the application of pure ichthyl, or ichthyl diluted with two or three parts of water. The injection of phenol in glycerin or oil at several or more points in the lesion has long been recommended, subsequently a 25-percent ointment of ichthyl being applied. As soon as the growth is broken down, the pus and detritus should be removed and the cavity sprayed with dichloramine-T in chlorcosane, or loosely packed with gauze saturated therewith. After free incision, dichloramine-T should always be used. The old deep crucial incision has given way to a great extent to the complete extirpation of diseased tissue by the curet or knife.

A patient suffering from carbuncle should receive the appropriate stock- or an autogenous bacterin and, internally or hypodermically, strychnine, quinine and iron. Calcium sulphide and echinacea may also be pushed to saturation.

Do not forget that, in many of these cases, the administration of yeast in large doses, three times daily, has proven of great value.

QUERY 6571.—“Achondroplasia,” J. C. C., Virginia, has a boy, nine year old; height, 3 ft. 11 in.; weight, 78 pounds. “Very fat; underdeveloped penis and testicles; average mentality, above the average in general knowledge and conversation. His case has been diagnosed achondroplasia, at Johns-Hopkins. Seems to have improved some on 1-grain thyroid and 1-grain anterior pituitary doses. Five other children in the family are normal. What more can I do, or who can give me the latest on this difficulty?”

The fact that this case has been diagnosed as achondroplasia at Johns-Hopkins is reasonably strong evidence that this

disease obtains; yet, as we understand achondroplasia, the victims rarely exceed, even as adults, four feet in height, the extremities being extremely short, the head large and the fingers usually being of equal length and diverging; the so-called “trident hand.”

You state that the sexual organs are underdeveloped. In achondroplasia, sexual precocity is supposed to be the rule. The mental development is usually normal and the muscles and bones are extremely strong.

Unfortunately, the abnormality in cartilage and bone formation arises in fetal life; later treatment, therefore, can not possibly prove of material benefit.

We believe that you can do little more than you are doing, in fact, the more recent writers are inclined to believe that the administration of thyroid derivatives is useless; neither is there any pathologic evidence, as a rule, of any error of the internal secretion, such as the pituitary.

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QUERY 6572.—“Tachycardia,” C. B. K., South Dakota, writes: “Am treating a boy, twelve years old, with rapid, tumultuous heart action; heart consciousness is mild, not as much as one would expect. Nervous exhaustion is not marked. Does not complain of fatigue, to speak of. They have taken him out of school as, the longer he goes, the more dizzy he becomes. Dizziness seems more objective. A little tinnitus aurium. One day, he had an attack after using typewriter. His glasses seem to fit him all right. Feels better when out of school. Learns easily. If he listens to anyone talking, apt to get too engrossed—too much concentration—and this makes him nervous in a way that he can not describe. They say that nerve exhaustion does not affect boys of this age; still, this case might be so classified. At one time, the heart rate was 110; at another, 90. When at the last figure, it seemed more irregular than I had noticed in other examinations. Whether this is a pure tachycardia, I don’t know. There is no heart murmur. He is a little under size for age.”

We wish it were possible to offer some really helpful therapeutic suggestions in the case of tachycardia you briefly describe, but, unfortunately, just such symptoms may

present and be due to any one of several underlying causes.

First, it must be borne in mind that tachycardia (with normal mechanism) may be considered natural under certain circumstances. There are numerous individuals whose normal heart action is at 100 or even more per minute. Again, mere emotional causes, exercise, change of posture, may produce temporarily a more or less marked increase in the rapidity of the heart's action.

The essential point is, to differentiate between the simple and the paroxysmal form of tachycardia.

In the simple discontinuous type, we have a normal rate when the patient is perfectly quiet, but excessive response to (a) exertion (slight reserve power of heart), (b) emotions; or both.

In the continuous variety, the rate is continuously increased, and, in addition, there is excessive response to exertion or emotion. These forms are observed in (a) acute fever; (b) debilitating conditions. Thus we have (1) phthisis (where it is an early and important sign), (2) convalescence from prolonged pyrexia, (3) anemia, (4) organic disease of the heart, valvular and myocardial, (5) hysteria, neurasthenia, menstruation, puberty, (6) or of reflex origin—gastric or intestinal. In exophthalmic goiter, the heart rate is, of course, materially increased.

In the simple form, the rate rarely exceeds 140. It is markedly affected by exertion or rest, emotion, alteration of posture, atropine. The mere changing of position of the patient from standing to lying may slow the heart from 20 to 30 beats; normally, such change does not exceed 10. The heart does not dilate, the attacks appear and cease gradually. The heart contracts more rapidly, diastole being shortened more than systole. The peripheral vessels are dilated and often throbbing. In simple paroxysmal tachycardia, which may occur at any age but is commoner in males, you normally can

elicit a definite etiological factor. A previous rheumatic fever is not infrequent, and mitral stenosis is often associated. The factors causing the onset are (a) exertion or emotion; (b) gastric disturbance, especially flatulence; (c) less often, influence of certain postures. Here, the rate is usually high—140 to 190; rhythm regular. It is unaffected by exertion, emotion, alterations of posture, rest, atropine or digitalis. The attack appears and ceases abruptly, the duration being a few seconds and upward. Attacks have been known, however, to last for ten days to two weeks. Termination is as sudden as the onset; recovery rapid. At this time, often, much flatus or urine is voided. Occasionally, progressive cardiac failure is observed, or sudden death.

Prognosis is, of course, difficult, and much depends upon the frequency and duration of attacks, the rate during paroxysm, reserve power of heart, age, and so on. Children and young adults may "outgrow" the attacks.

Naturally, treatment in either condition must be based upon an understanding of the cause. In this particular instance, we would suggest that you make a very careful examination and inquire into the boy's habits. The removal of affected tonsils, circumcision, dilatation of an abnormally small meatus, even of the anal sphincters, may be necessary. His eyes should, of course, be examined by a thoroughly competent oculist.

You do not give us any idea of the past history, but it would be well to ascertain definitely whether or no the boy has had acute rheumatism, scarlet fever or enteric fever.

On general principles, you might, of course, give cactin and the valerates, taking care to assure digestion and thorough elimination (renal, dermal and intestinal). Careful dieting might prove beneficial, and the boy should be cautioned not to over-exert himself and to rest at least nine hours out of the twenty-four.

